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ESSAY ON "IMMUNITY."*

BY "ECRIVAIN."

MR. CHAIRMAN AND GENTLEMEN,—The subject which I have chosen for my essay this evening is immunity, and a more important doctrine in its bearing on the health and welfare of mankind, and the domesticated animals, has never been given to the world. Every day new facts come out, which could not be done but by the disturbance and exercise of both the practical and scientific mind. Many do not believe much in immunity, but when we look back and study the number of lives, both of animals and of men, that have been saved by the production of immunity, we cannot take such erroneous views. We must not, however, be too free in a subject of this kind, for yet many weighty reasons have to be investigated and confirmed; still if the progress is carried out to the extent as in late years, there may come a time in future years when most, if not all, of the contagious diseases will to a certain extent become eradicated. At the present time, however, we may reasonably say that already sufficient groundwork has been procured to inspire us with boundless hope. Let us, therefore, consider for a short time the many theories advanced on the subjects; the ways by which immunity is given, and the most important diseases against which it can be given, and also its varieties.

Definition.—Immunity is the protected condition of the body, naturally or artificially produced against the injurious effects of some of the virulent contagia. Immunity may be divided into three kinds, namely:—(1) Natural; (2) Inherited; and (3) Acquired; and it is to the latter that I will mostly confine my paper, yet I could not pass by the other two without a brief description.

* Read before the Edinburgh Veterinary Medical Society.

Inherited immunity implies that the immunity is handed down from parent to offspring. For example, if we inoculate Algerian sheep with a cultivation of anthrax during pregnancy, their lambs are brought forward as usual, and are strongly immune against anthrax. Again, no negro is liable to yellow fever, and this can be accounted for by the fact that only those who can resist the disease will live to have children, and consequently the immunity is handed down, and perhaps strengthened by the union of those immune.

Natural immunity may be had example of in field mice, which are refractory against the bacillus of septicæmia, while on the other hand it is so fatal to house mice. Again white mice are not affected by diphtheria, nor do fowls contract tetanus. This natural form is also characteristic of certain species, for we never see rinderpest attacking the horse, or glanders attacking cattle. This natural form may also be seen in susceptible species, for in many cases we see some of our domesticated animals in the very midst of contagia, yet don't contract the disease, and although this may be so in some cases, yet in others it will come under the headings of inherited or acquired. Natural immunity may not be perfect in every case, and for an illustration of this we may take anthrax in sheep. We know that sheep in this country are easily inoculated, and cause the death of the animal, yet if we inoculate Algerian sheep, they are killed only by very large doses, and sometimes not then. By whatever way natural immunity is given, it cannot be transfused by inoculation.

Acquired immunity is illustrated by protection afforded by one attack of the disease, or by inoculation against subsequent attacks. We all know that micro-organisms of disease are quite harmless in the system, provided that system be protected. Thus the convalescent from diphtheria have living organisms in their mouths often for weeks, but are unaffected by them; and again, persons who have had cholera may pass the organisms in a state of activity and virulence by the bowels, and yet to all appearance be quite well; nevertheless, these cases are a grave source of infection. Acclimatisation has also to do in some cases with immunity, for in tropical countries the animals and human beings are less susceptible to the diseases of their own country. Civilisation also bears towards it, and for this reason we see rabies much more virulent in wolves and wild dogs than in our domesticated dogs at the present time. I do not mean that on one attack of a certain disease, or rendered immune

by direct inoculation protects the system from the invasion of any virus, but simply to the one causing the disease, or that in relation to the one inoculated, and this may be for a considerable time or for a short period only. In cattle or sheep recovered from anthrax, or have been rendered immune by inoculation, they never have the disease again; but a horse may have anthrax over and over again, perhaps, in a mild form, although immunity may have been conferred for a short period only. Now, in bringing about disease by inoculation, many things favour the development, while others act antagonistic to it, of which one or two might be here mentioned:

(1) Age appears to exert some influence on the susceptibility of inoculation, for we see that young animals are, as a rule, more easily affected than the senile.

(2) The dose of the virus is also a very important consideration in the production of immunity. Let the attack of a disease be as severe or as slight as possible, it does not influence the degree of immunity acquired by the animal, but suppose we inoculate, say, ten Algerian sheep with a virus increasing in strength or quantity from the first to the last, all stages of immunity can be obtained until the dose becomes too severe, when death is the result; that is, with anthrax virus.

(3) The temperature of the animal is also a condition which renders the inoculation favourable or unfavourable, and this is, no doubt, one reason why certain diseases are confined to certain species. Rinderpest, for instance, never attacks horses, but seems to be confined to the bovine family, although it can be produced in the sheep and deer. For another example, take the fowl, with a temperature of 107·3° F, is exempt from anthrax, until it has been cooled down by pulling off the feathers and plunging it into water at a low temperature. Now this, as regards temperature, brings forward a theory in medicine which, I have no doubt, will have struck many minds, namely, the giving of febrifuge medicines during infective fevers—in fact, treating symptoms. When we consider it our duty to assist nature in every case (and this is one of nature's attempts to rid the system of injurious material), why do we run the antagonistic course?

(4) The ptomaines in many cases seem to act antagonistic to the organisms from which they are produced. In putrefying muscles the aromatic substance excreted by the microbes exert a deadly influence on their own existence. If, however, some of these microbes be taken and introduced into a suitable medium for their growth, they will again

become strong until they have excreted sufficient poison to interrupt their further development. Whatever the composition of this anti-parasitic may be, has not been fully determined, but in putrefaction carbolic acid, together with skatol and indol are some of the products. Many chemical substances given in specific diseases are said to have a depressing action on the microbes, but cannot be given in sufficient quantities to stop the development of disease. Quinine is a good example, retarding the growth of the bacillus anthracis in solution of one to eight hundred and thirty, and completely prevents it when in solution of one to six hundred and twenty-five.

Leaving these influences aside, we come to the question, "What gives immunity?" and upon this many hypotheses have been advanced, and much anxiety expressed, and still at the present day it remains somewhat dull.

Klebs and Pasteur explained that in the course of the first attack of a disease (specific), some material essential to the life of the microbes became used up, so that no longer could the organism exist in the system. If this was correct why could not the substance be found in the blood by analysis, and one would be inclined to opine that if it existed in small quantities as it was supposed, it would have been soon used up before many microbes thoroughly invaded the body, and further, what would prevent the material being returned to the blood.

Next came Chauveau's theory, that the microbes excreted materials which set against their own development, and that these ptomaines or whatever they might be, remained in the body for a considerable period. Here again comes the question: How could any liquid material unnatural to the body remain for a long period, when we know that nature attempts to expel any material abnormal, and one would assume that during the first attack, these ptomaines would soon overcome the microbes, and thus prevent the death of the animal, which is nearly always certain among the susceptible, at least in most specific diseases.

Then Grawitz suggested that any battle between cells of the body and the microbes, educated the former during the contest, increasing their vital energy and assimilating powers, and rendering them more able to overcome the next invasion.

Then came Metschnikoff's theory, which is gaining rapid strides towards the production of immunity. He says "that the protection of invasion is due to the action of the amœboid

cells of the body : that these are living masses of protoplasm and can ingest inert or injurious organisms, digest them, cast out their effete materials, and thus protect the system from invasion."

Whatever of these ways immunity occurs, we must have some power of resistance developed in or by the cells of the body in order to resist the specific bacterial activities and their poisonous products.

During the last few years great stress has been laid upon the fact that the bodily humours possess great bactericidal properties, and many observers have shown that the blood plasma, defibrinated blood, blood serum, blood as a whole, or the aqueous humour of the eye, and other fluids and exudations of the body, act against many microbes, even killing them in greater or less numbers, and sometimes in a short space of time. From these experiments, an endeavour has been made to find out some elucidation of the phenomena of immunity. By a careful study, however, it has been found out that no relation whatever exists between the two. Thus it often happens that no bactericidal properties of the fluids mentioned is more pronounced in susceptible animals, more so than in refractory. For example, if the bacillus of anthrax be introduced into the humours of a susceptible rabbit it is found that the bactericidal property is much greater than in a refractory dog, and Behring and Nissen have shown as against the bacteria of pneumonia, diphtheria, and anthrax, the antizomotic action exists to the same degree in the fluids of animals of the same species, whether they be susceptible or have been rendered immune.

In other times, again, blood drawn from the body has more pronounced antizomotic influences than in the body; for in some cases a little blood drawn from the system would kill a mass of bacteria greater than that, which, if injected into the circulation, would, in all probability, produce death. So important as the action may be outside the body, yet it has no connection with what occurs in the immunised animal. Now comes the question, "What causes these tissue fluids to exert such an influence?" and I think the following will explain it. Death of bacteria transported into organic fluids is no doubt due to the sudden change in medium, and that in passing from one medium to another, by successive slight modifications of growth, it is easy to make bacteria to live and even grow, which, when the change of the environment has been abrupt, swiftly leads to their destruction. It has been further stated that certain bacteria, if cultivated in blood or serum of

an immunised animal, becomes attenuated, and no longer produces a fatal disease. The bacillus of anthrax, grown in blood of vaccinated sheep, no longer kills rabbits, and the streptococcus of erysipelas, grown in the blood of immunised rabbits, only produces slight disturbances in susceptible animals of the same species; but here again we are dealing with fluids withdrawn from the body and modified in various ways. If this destruction of bacteria outside the body was due to some specific action on the fluids, one would naturally expect to find the same in the circulating blood; but such is not the case. Suppose we inoculate a refractory rabbit with the anthrax virus, such bacilli as are not destroyed maintain their virulence for a sufficiently long time, and it is possible to kill eight days after inoculation into the anterior chamber of the eye with a drop of exudation taken from the seat of inoculation in the rabbit, and kill a guinea-pig in about three hours. Therefore the period of so long duration within the refractory animal of the organisms, has not taken from them their virulence, although twenty-four hours is enough to completely attenuate the bacilli cultivated in the removed blood of a refractory sheep.

Years ago it was established that the immunised system, instead of being an unfavourable soil for the preservation of the virulence, tends rather to reinforce the property. To exalt the virus already attenuated one always employs not animals susceptible, but those slightly so, or, in many circumstances, those immune. By this method the bacillus anthracis in its most virulent form has been obtained by passing through fowls, also by passing through dogs, both of these animals of which we know are but slightly susceptible to anthrax. Again, the virulence of chicken-cholera was gained by passing through the vaccinated male bird.

I have previously spoken of the protection of the animal body by the bacteria and their products against the diseases to which they themselves gave rise, and we must see how this protective action is brought about. Acquired immunity, as I have said, is not only given by a previous attack, but also by inoculation, and before this immunity can be given without causing a fatal termination there must in some cases be a change in the virus, or, in other words, become attenuated. The virus of anthrax, if cultivated for several generations in the aqueous humour removed from the eye of an ox, modifies its virulence, that it no longer produces death, but gives immunity, and if these cultivations were carried on a little longer, no symptoms of anthrax could be seen. Temperature

has a similar action on the anthrax virus. If the blood containing it be heated to 55° C. for ten minutes, and then inoculated when cold, it acts just as well as if taken through several cultivations. To procure real immunity against anthrax it is necessary to inoculate the attenuated virus twice, as cases have been known not to be rendered immune by one inoculation only. In attenuating anthrax virus outside the body, where we know they can only form filaments and spores, not only are the rods attenuated, but also their spores, and if these spores be introduced into a nutrient media, they will grow into bacilli which are markedly attenuated. There are many chemical substances by which anthrax virus may be attenuated. Carbolic acid, if added to the blood in the proportion of half per cent., and kept for something like twenty days, produces an attenuation, and any strength of virus may be obtained by keeping a few days longer if you require a weak vaccine, and kept a shorter time if a strong one is necessary. After this has been done a culture is made and used for inoculation. Bichromate of potash and many other antiseptics produce a similar attenuation. Certain animals possess an attenuating property on the anthrax virus, as, for example, white mice killed by anthrax provide a protective vaccine for sheep, and guinea-pigs for cattle. Now the question arises—Is it the bacteria or their products which produces the immunity? and I think we can come to the conclusion and say their products. For a proof of this we could not desire anything better than the production of inherited immunity. Inoculate a ewe in pregnancy with an attenuated virus of anthrax, the bacilli of which do not pass into the fœtal circulation, being prevented by the filtering process carried on between the fœtal and maternal placenta; still, that lamb when born is quite immune against such a disease. This surely proves that the products give the immunity, and not the bacteria themselves.

Other diseases, as fowl and hog cholera and even hydrophobia, can have immunity conferred against them by their products from cultivations, by first introducing small doses, and then gradually increasing them. Now the next question comes to us: "How can these products give immunity, for it is well known that although they may have a repelling action on the organism from which they spring, yet they can't remain in the body for any length of time?" The general idea is that these products first given in small quantities and then increasing, acclimatised the tissues and cells of the body to the action of the ptomaine or poison, and might here be

resembled to the immunity; some individuals reach against morphine, tobacco, alcohol and other poisons. Such immunity, according to Behring, is developed quickly or slowly, and the rapid variety is in his opinion connected with an alteration in the blood. That is, the ptomaine which gives the immunity is diffused to all cells by its being in the circulation, while in the slow form the reaction may be local, and the immunising material is thus gradually taken to the cells. These poisonous substances are supposed to be an albumose. Hankin, who separated an albumose from the anthrax germs, said it was really the substance which gives the immunity, and he could kill rabbits with the five millionth part of their body weight, yet if he inoculated with the one-tenth millionth of their body weight, he rendered all immune, and he also obtained an instrument so delicate as to even render white mice immune. However, a certain time must be allowed after protective inoculation before the invasion of a strong or ordinary virus. Thus if cattle are inoculated with an attenuated anthrax virus, and then in about three or four days afterwards be submitted to the ordinary virus, they will contract the disease, and as deadly as if not previously inoculated; but if time is allowed (and perhaps inoculated a second time as should be), say twenty-four days, the animals are immune against the disease. This can be accounted for quite easily. If time is allowed, the cells of the body are acclimatised to the action of the stronger virus, but if time is not allowed the albumose assists the strong virus rather than prevents its ingress.

Certain forms of septicæmia can be prevented by the introduction of some of the products of the organism which produces the disease, and this immunity guards the attack of the most virulent organism of the same nature.

From a consideration of these facts we are justified to assume such immunity as an acquired tolerance of the specific poison, and the gradual recovery of such a disease for instance as anthrax, in a partial state of immunity, gradually passes into a more perfect form. This tolerance which varies in degree, can produce an immunity more or less perfect in form, and this has been taken advantage of by Hueppe, as a method of proving that a putrefactive organism produces small doses of the same specific poison as the pathogenic form. The pathogenic probably reduces larger quantities of toxine than the non-pathogenic, but inasmuch as the saphrophytes do not induce disease, nor have they been cultivated into the virulent

organisms, the facts still remain dull. Although I say that these non-pathogenic have not been cultivated into the pathogenic organisms, it is still quite possible that it may be done, and perhaps is done when no pains are taken. In all probability the bacillus subtilis may be converted into the bacillus anthracis, and our Principal is of a strong belief that this can take place in a manure heap.

In a few cases animals can be rendered immune by using non-pathogenic organisms as vaccines, and in other cases again not so susceptible to the virulent diseases, and this seems to form a close relation between the pathogenic and the non-pathogenic organisms. The bacillus mycoides or earth bacillus when cultivated on a sterilised potato or gelatine, and inoculated into rabbits and mice, and even cattle, produces immunity against anthrax.

This view of immunity as a tolerance of the specific poison, simple and natural as it appears, would have no doubt received more attention were it not that a series of facts of a different nature which we are now led to regard as approaching in the direction of an antidotal action, appeared to be inconsistent with it. It has been discovered that if along with bacillus anthracis, other organisms which have no relation to it be introduced into an animal simultaneously, the disease does not run its normal course and indeed in some cases completely withstanding the disease. The streptococcus erysipelas is an organism which produces these effects against anthrax, and some other, of which I may mention the bacillus prodigiosus and the pneumococcus. Considering that the specific poison gives rise to the immunity, it seems most probable that the action of these other organisms depends on their products. This attenuation of the virulent organism by the products of the non-pathogenic and even pathogenic cannot be well explained. It suffices here to know that as the toxines of the pathogenic produce the immunity, so the products of those organisms which protect against anthrax, exert their action apart from the presence of the virulent organisms. Then the question comes, "How do the products of other organisms protect or modify the disease?" In some experiments with a saphrophytic organism acting with that of anthrax no complete immunity had been acquired, yet some degree of tolerance had been acquired as manifested by the disease running a more prolonged course. This action is no doubt the antagonistic of the products of the non-pathogenic over the pathogenic. There may also be perhaps some stimulating action on the

cells of the body, which are paralysed, so to speak, by any virulent organism in the susceptible, but by being thus stimulated by the products of the non-pathogenic are able to act more vigorously on the invading organism. It must not be supposed that any non-pathogenic organism will antagonise a pathogenic, for we see in the case of the bacillus prodigiosus inoculated with the virus of quarter-ill, the reverse is the effect, so in this case we may safely say that instead of antagonisms, we have a summation of their actions. Again the staphylococcus aureus, and albus, are much more virulent when acting together. Swine plague is also supposed to be due to a mixed infection. The sensitiveness of an animal to a disease germ is to be referred essentially to a susceptibility of the specific toxine, inasmuch as when the most susceptible species of animals has once acquired an immunity by a passing attack, it exhibits a refractoriness to a subsequent infection similar to those species that have a natural immunity from the disease. Some of the reasons at the present day indicate that a species more sensitive to the disease germ, may be more susceptible to the antidotal treatment than a more refractory species; a fact which can be understood when we consider that the action of the products of the indifferent organisms may vary in the different species, and that a difference of this nature may more than equalise for any original greater susceptibility to the poison of the disease germs. Pawlowsky found that in his experiments on rabbits inoculated with anthrax and erysipelas, that the animals which did succumb did not die of anthrax, but to erysipelas, the blood swarming with streptococci, although normally it suffers only a temporary attack from erysipelas, the microbe never being able to penetrate into the blood stream unless the vitality of the system has been previously lowered. We thus see it is of great importance to know what will prolong the course of a specific disease, as it will give time to the cells of the body to acquire a certain degree of immunity by the toxines, and thus deal more fluently with a subsequent attack. When a susceptible animal is inoculated with a vaccine, the tolerance acquired by the tissues is able to keep pace with the toxine produced, so that ultimately the power of the cells comes into action, and recovery ensues. This acquired immunity enables the animal to cope more successfully with a more rapid production of a stronger toxine, and, ultimately, of the most virulent organisms. We must, however, take into account the attenuating influence which the tissues may and probably

do exert on the organism, both locally and in the course of the disease, for it is a well-known fact that some specific organisms become attenuated during their existence in the system.

I will now pass on to the diseases of our domesticated animals in which immunity can be given.

ANTHRAX.

I am sure you will think I have spoken enough of anthrax, so I will only add here that immunity is given against this disease with wonderful success. Cattle are generally inoculated outside the ear, and sheep on the inside of the thigh.

HYDROPHOBIA.

Immunity against this disease is of great consequence, not only to render dogs immune, but also to protect the human frame. Pasteur is the man to whom all credit is due in this case. The virus taken from the fluid about the spinal cord of dogs is more certain than the saliva, and when introduced into monkeys, becomes attenuated. Pasteur also found that by inoculating rabbits, the virus increased in strength; so he was able to obtain any strength of virus from the first inoculated upwards. He then inoculated thirty dogs, commencing with the weakest virus, and giving a stronger each time to each dog, and in this experiment, three quarters of them were rendered immune to the strongest virus, even from the hydrophobia virus of wolves which is the strongest. If the spinal cords of rabbits dead of the disease are kept for a few days, and particularly if in warm weather, the virus becomes considerably attenuated when kept in glass tubes. This being a good way of attenuation, emulsions were made beginning with cords that had been exposed from three to fourteen days, and fifty dogs were inoculated for ten successive days, commencing with the virus that had been exposed longest, till that which had been exposed least, and in every case of the fifty dogs immunity was given. Pasteur having produced immunity in dogs, next brought forward the curative method for the human being, and if you will allow me to trespass a little I will describe his first experiment. His first subject was a boy who was severely bitten on the legs and arms by a mad dog, and after consulting medical authorities he inoculated him for ten consecutive days, making thirteen injections in the time. On the first day he inoculated twice, the first injection being an emulsion of cord exposed in a flask for fourteen days; the second on the same day had been exposed

ten days. On the second day he again inoculated twice, the first being exposed eleven days and the second nine. The following days he inoculated once only, until the last day was reached when he injected an emulsion made from a cord that had been taken from a rabbit which died on the same day. This curative method proved very successful, for the boy lived, and many persons bitten by dogs since, have been treated in a similar manner. The time, however, between the bite and the curative inoculation is of great importance, for if longer than three or four days, the curative action is not so certain, but if within this period it is most successful, and one of the greatest blessings that ever was put before the public. Here arises an important question of immunity: "Why does the virus obtained in the bite not exert a deadly influence before the attenuated virus?" and I think it can be explained in this way. When a bite is given, the virus remains dormant for some time and is localised, but when inoculation is carried out by an attenuated virus, it acts directly and acclimatises the cells of the body, before the active virus can exert any deadly influence. I don't think there is any particular spot to inoculate dogs; under the skin over the ileum is generally the place but a more rapid method is by injecting it into the jugular vein and in this way acts sooner on the cells.

(*To be continued.*)

NATIONAL VETERINARY ASSOCIATION.

THE Fourteenth Annual General Meeting of the National Veterinary Association will be held, at the invitation of the Eastern Counties' Veterinary Society, in the Assembly Rooms, Great Yarmouth, on Wednesday and Thursday, July 8th and 9th, 1896, under the presidency of Mr. William Bower, East Reedham, Norfolk. Professor McFadyean has consented to contribute a paper on "Swine Fever: its Nature and Suppression," the discussion of which will be opened by Mr. Clement Stephenson, Newcastle, and by Professor Edgar, Dartford, Kent. Professor Almond, Chelmsford, has promised to introduce for discussion "A practical method of gradually, effectively, and cheaply reducing Bovine Tuberculosis to manageable proportions, and utimately stamping it out." The great and urgent importance of these subjects should ensure a large attendance. The arrangements for the meeting are in charge of a most energetic committee, of which Mr. W. Shipley, jun., Great Yarmouth, is chairman, and Mr. W. R. Mills, Norwich, secretary.

ANOTHER COMMISSION ON TUBERCULOSIS.

It is stated on authority that the Government are about to appoint another Royal Commission to investigate the burning question of tuberculosis. The last Commission consisted of scientific experts, who dealt mainly, if not entirely, with the scientific aspects of the question. But, from all that can be learned just now, the new Commission will consist for the most part of practical men, who will be deputed to take up the findings of the scientific experts, and draft a thoroughly comprehensive and workable scheme for dealing effectively with this dire disease. This is a wise resolve on the part of the Government, for the prevalence of the disease has become a most serious source of loss to the stock-owners of the country, to say nothing of the way in which the seeds of consumption are sown broadcast among human beings through the use of milk drawn from tuberculous cows.

A LUSUS NATURÆ—DIFFICULT PARTURITION.

BY SAMUEL LOMAS, M.R.C.V.S., WILMSLOW, CHESHIRE.

On Wednesday night, January 29th, I was requested to go and see a cow which the owner thought was putting her uterus down although she had not calved, but had very strong pains.

On my arrival I found the intestines of the fœtus protruding just beyond the vulva. They were congested, thickened, and blood-stained. I traced these forward along the mesentery to their attachment under the spine. I could feel bare ribs, spine, and heart bare, pulsating: the arteries from it beating, and all the viscera, but no hair or skin.

At first I could feel no head and no legs. As the viscera were impeding my exploration, I removed them, and afterwards found the poll, worked it back, and got to the orbit, into which I inserted a hook, applied traction, and got to the jaw. I placed a noose on the jaw, and afterwards found two fore-legs which I roped; we then got the head and the two fore-feet into the vagina, while here the rope on the jaw broke the bone, and immediately after there appeared a large fluctuating substance under the lower part of the vagina protruding beyond the vulva. I put the fœtus back a little and reduced the enlargement, brought up fœtus again, and the substance reappeared, the vagina covering it was cut through, I believe by the fœtus's teeth, which, in consequence of the jaw being broken and the traction pat upon it by the

rope, stood out at an angle from the ordinary position, and out came the cow's small intestines. As the cow was lying down, we made her get up, put the calf well back, and put the intestines back through the laceration. I held the edges of the wound together until we had got the fœtus well on it, and then pulled the fœtus away. I at once sutured the wound with a continuous silk suture, getting good hold of all the tissues, backed cow well behind with straw to raise hind quarters, gave purgative and commenced fomenting. The cow has made a capital recovery, pulse never exceeded 68, nor T. 102°F.

As will have been gathered from preceding description the fluctuating substance, which protruded from vagina, was the intestines of cow being hooked up under the vagina by hind feet of fœtus.

I think this is one of the unique cases on record as it commenced by the fœtus presenting its intestines for treatment, and terminated by the mater presenting hers for replacement.

The Fœtus.

As soon as born the fœtus reverted to the position as it was in utero, viz., the side and viscera being presented, and the

head and all the feet being furthest from the os uteri, the head being in the centre, the fore legs twisted round one side of the head, the left side as it lay in utero, and the hind legs round the other side, the right.

The right fore leg.—Radius thin: front surface thin and sharp, with an angle at knee, like an ordinary elbow and foot twisted half round.

Left fore leg.—Normal to fetlock, below it was bent, foot upward and forward.

Hind legs.—No ossa innominata. From stifle to fetlock

normal; fetlock, pastern and foot curved upward and forward (half-moon shape).

Head and tail.—Normal.

There were no abdominal muscles. The skin that ought to have formed portion of abdominal wall was doubled forward over the shoulders, forming a kind of hood, which reached to the calf's poll in the centre, down to the elbows on one side and to the stifles on the other side.

The spine was curved—first upward, then downward, then forward—forming two distinct spinal curvatures.

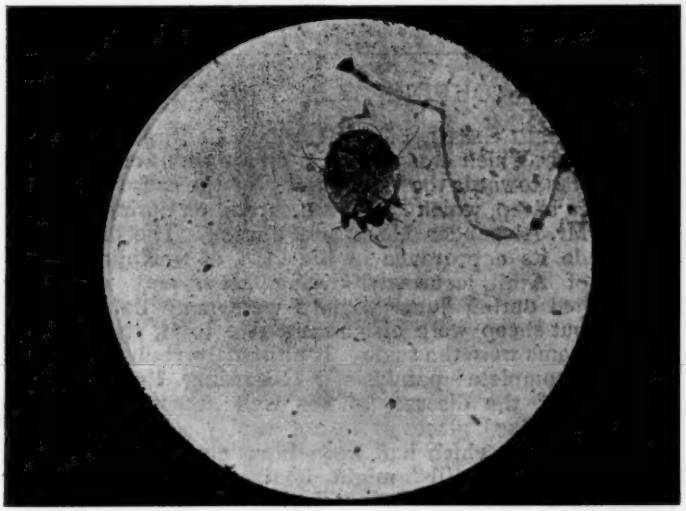
MANGE IN CATTLE.

BY W. R. DAVIS, M.R.C.V.S., NEW VETERINARY COLLEGE, EDINBURGH.

IN the February number of THE VETERINARY JOURNAL I reported on outbreak of sarcoptic mange which occurred among dairy cows in the suburbs of Edinburgh, and stated that there had been an extension of the disease to the dairymen. In the *Veterinarian* for March Mr. E. F. de Jong, L.R.C.P.E., L.R.C.S.E., L.F.P.S.G., F.R.C.V.S., has a communication describing the same outbreak, in which he says that the acarus is not a sarcopt but a psoropt, and that the skin affection from which the attendants suffered was not

scabies, but eczema, "due to irritation produced by secretion from the cows." I will only say with regard to the latter statement that Dr. Williamson, Assistant Medical Officer of Health for Edinburgh, has ample proof that it was scabies; that Mr. Rutherford, F.R.C.V.S., and Principal Williams both saw the men, and they both considered that the men had the "itch," that some of the workers had been affected for nine weeks, and that they did not get better until treated with acaricides. However, I am not concerned to prove whether the men had eczema or scabies, but I am interested that the identity of the acarus under consideration should be settled,

because authorities so confidently assert that the sarcopt does not affect the ox. Although I was perfectly certain about the matter myself, I have, since reading the article by Mr. E. F. de Jong, L.R.C.P.E., L.R.C.S.E., L.F.P.S.G., F.R.C.V.S., made a large number of preparations. These have been examined by Dr. Beard (University of Edinburgh), Mr. R. S. Macdougall, B.Sc., Lecturer on Parasites at this College, Dr. Hunter, Principal Williams, and several others, and the unanimous opinion expressed is that the parasite is undoubtedly a sarcopt. Two microphotos taken by



Mr. O. C. Bradley are appended, and it can be easily seen that the description of a sarcopt is accurately conformed to.

Body rounded; head short, rounded; sucker borne on a simple pedicle (not as in the psoropt on a three-jointed pedicle); posterior legs are not seen beyond the contour of the body when the creature is viewed dorsally. (In the psoropt the posterior legs do protrude.) A psoropt has, in fact, a long head, long legs, and a three-jointed pedicle, while a sarcopt has a short head, short legs, and a simple pedicle.

It is quite true that Mr. E. F. de Jong, F.R.C.P.E., L.R.C.S.E., L.F.P.S.G., F.R.C.V.S., does not state in so

many words that I mistook a psoropt for a sarcopt, but, of course, the inference is obvious. I am not going to say that Mr. E. F. de Jong, etc., did not find a psoropt, because one does not exclude the other at the same time I would advise him however to examine a few more specimens.

The tone of superiority and finality adopted by Mr. E. F. de Jong, L.R.C.P.E., etc., is rather amusing, one would think, that it must make him feel very comfortable, only it does not sort well with loose inarticulate writing. Such expressions as "the animal licking itself with its tongue" (what else could the poor thing lick itself with), etc., etc., might make one suspect the superior and final person in weightier matters.

"LOUPING ILL" IN SHEEP.

MR. R. GREIG SMITH, of the Durham College of Science, read a paper, which was a report on the result of a series of experiments towards the determining of the cause of "louping ill" in sheep, which have been carried on during the past year by Mr. Alexander Meek and himself. The disease, he said, made its appearance in the form of trembling in the middle of April, continued during May, and gradually disappeared during June. Lambs were more liable to the disease, but sheep were also susceptible to it, and in both the symptoms were the same. It ultimately resulted in more or less complete paralysis. Regarding the infectious character of the disease, it was well known that sheep bred on diseased places were not nearly so liable to the disease as sheep which had been introduced from unaffected places. "Louping ill" might be introduced into a new place, but in such cases, unless the importation from affected farms be continued, the malady might disappear. The probability of its doing so appears to depend upon the nature of the soil. In this country it was confined to the North Tyne district of Northumberland and to the contiguous border counties of Scotland. It was rare in Berwickshire, but was known in other parts of Scotland. It was one of the features of the illness that certain "cuts" of land were very liable to it, while others, even on the same farm, were just as free. In many cases the nature of the pasture was such as to suggest to an experienced man the probability of its being subject to the disease. A dry and foggy pasture seemed best suited for harbouring the cause of the malady; but a peculiar feature was that the disease did not reach the same intensity,

even in neighbouring places, during the same year. After dealing at some length with the pathology of the disease, the paper stated that the changes in the appearances might well be explained from the action of some poison of an irritant character introduced into the blood. A very general impression amongst farmers and shepherds was that the disease was in some way associated with ticks. Some said that they never saw "louping ill" without ticks, nor ticks without "louping ill." Reports generally favoured such an opinion. Ticks, the writers imagined, might be present without the disease, but the evidence for the other case, the disease without the ticks, appeared to be very unconvincing. The fact remained that farms and districts noted for the disease were peculiarly rich in this parasite. The ticks were developed on the ground in the spring, and, impelled by hunger, attached themselves to passing animals. The result of the first year's experiments they had conducted were such as to convince them that the location of the bacteria showed that the affected animals were inoculated by the tick, and it followed that the tick must have carried them from the soil or grass. Further details were withheld until further experiments had been conducted, but it might be said that until the bacterium, which undoubtedly produced "louping-ill" in sheep, was isolated, cultivated, and experimented with, it would be immature to suggest means of preventing, combating, or curing the disease; but they were of the opinion, from what they had done, that any process which tended to keep down the ticks should have a preventive effect upon the disease.

A cordial vote of thanks was accorded to Mr. Meek and Mr. Smith for their interesting report.

Editorial.

ADMISSION OF FOREIGN CATTLE.
MR. WALTER LONG'S AGRICULTURE BILL.

THAT portion of this Bill which excludes the landing of Canadian and Foreign Store Cattle has been received with much disfavour by the cattle feeders of Scotland.

Perhaps it is not generally known that in several counties in Scotland the number of cattle bred is quite inadequate to the demand for feeding purposes, consequently these cattle fetch sometimes a higher price when lean than when ready for the butcher, and a feeder of such stock often experiences

an actual money loss, in addition to the cost of feeding and tending: has only a balance towards this loss in the form of the manure, whereas when Canadian cattle were allowed to land, they could be bought—fully grown big cattle, three and four years old—at a much less price than the home-bred ones; being fully matured, they fattened rapidly, and often sold to the butcher at £10 or more than their original cost, thus leaving a handsome profit over and above the cost of feeding, &c.

As is well known, these cattle have been kept out of the country on the plea that they brought pleuro, but now that that bubble has burst, and when it is proved beyond a possibility of doubt that there is no pleuro in Canada, why should these profit-paying animals be longer prohibited, and why, indeed, is the prohibition to be made permanent?

It is found to be impossible to rear cattle on highly rented lands, and to make at profit even at the comparatively high prices they command as store cattle. Thus the agriculturist is hampered and kept back by several unfavourable conditions. 1st. Owing to the rent of his land he is unable to breed and feed his stock to realise a profit. 2nd. He is unable to make a profit by his home-bred bought stock. 3rd. He is prevented from obtaining his store cattle from the only source from which he has a chance of securing a profit; and, finally, he has to compete with foreign fat cattle slaughtered in this country.

At a meeting of the Scottish Chamber of Agriculture held in Edinburgh on the 4th inst., the following observations were made:—

Admission of Foreign Cattle.

Mr. ANDREW HUTCHESON drew attention to the Government's proposed amendment to the Cattle Diseases Act, which, he said, would work more havoc among farmers than any measure they could be called upon to consider. He had, he said, always been an advocate of the admission of Canadian store cattle, and he still believed that it had never been thoroughly proved that they had brought disease into the country. But they had got past that stage—they were told now that the ports were to be permanently closed, and there would be no more Canadians. He would have accepted that position at once, and without serious demur, if Mr. Long had had the courage to go a step further, and prohibit the landing of fat cattle on these shores as well as store cattle. There could be little doubt that that was the right thing to do. He did not know what was Mr. Long's

private opinion on the point, but he quite believed it was in this direction. Mr. Chaplin, at all events, made no secret that that was his view; and in an interview that he (Mr. Hutcheson) had with him last year, he plainly said that that was the right thing, but that it would be all but impossible to carry it in the face of the opposition of the shipping and other interests. He (Mr. Hutcheson) did not doubt it would be difficult to carry such a measure; but were the agricultural interests of Great Britain to be sacrificed to all other interests? He was prepared to say that if Mr. Long's present Bill were carried there would be no economic rent in the land of Scotland. Many short-sighted breeders were proclaiming that this Bill would be a great benefit to them, and would raise the price of their cattle. He was glad to see, however, that some of their broader-viewed breeders were coming to see that after all the experiment of shutting out the raw material and admitting the finished article might be a very doubtful one. It was something like shutting out wheat, but admitting flour, and then expecting the price of flour to rise. No business could be carried on under these conditions. At the present moment it was the fact that it was the numbers of foreign cattle that came to their shores that regulated the price of beef, and not the quality of their home cattle. He was surprised that the landlords did not see the calamity that was threatened them. Farmers might get ruined, and go to the wall, and be done with it. But landlords had their land, and if farmers got ruined, they would get it all on their hands, and what could they do with it? The only fair thing to do in the circumstances was to make the whole cattle trade from abroad a dead meat trade, not allowing anything to be slaughtered on this side. He moved—"That, in the opinion of this Chamber, the present conduct of the cattle trade is adverse to the interests both of breeder and feeder, and its continuance on the same lines, as proposed by the Bill at present before the House of Commons, and entitled a Bill to amend the Diseases of Animals (1894) Act, will still further intensify the agricultural depression."

Mr. SCOTT-DUDGEON said no notice had been given of this motion, and as Mr. Hutcheson was known to hold extreme views on this subject, he thought it would be very injudicious at a small meeting like that to deal with the matter.

Mr. PETER FYSHE, Newtonlees, seconded Mr. Hutcheson's motion. He did not, he said, know whether Mr. Scott-Dudgeon was a breeder or a feeder, but this he could tell him was a matter that was of very vital importance in the district

from which he came—East Lothian. He supported everything that Mr. Hutcheson had said, and thought very strong representations should be made to the Government on the subject. The prices of store cattle were at present out of all proportion to the prices of fat cattle, and Mr. Long's Bill would only accentuate the evil, unless, as Mr. Hutcheson suggested, he made the whole cattle trade a dead meat one.

Mr. SCOTT-DUDGEON expressed his belief that the new Bill would be of immense benefit as placing the restrictions on a permanent footing. He was quite at one with Mr. Hutcheson in thinking that the foreign cattle trade should be a dead meat one entirely, and if Mr. Hutcheson would limit his motion to that, he would acquiesce in it at once.

Mr. HUTCHESON accepted the suggestion, and the motion was amended to read that no alteration in the law would be satisfactory which did not absolutely prohibit the importation of live cattle and sheep into this country. The resolution was then unanimously agreed to.

HONOUR TO WHOM HONOUR IS DUE.

IF I were giving a valedictory address to my students and wished, after furnishing them with such scientific rules and moral principles as had commended themselves to me during a busy life, to set before them an exemplar for their imitation, an embodiment of all that is excellent in a veterinary surgeon. I should have no difficulty in finding one. That exemplar would be Dr. George Fleming, C.B., who has recently been singled out by Her Majesty for the distinction of a special pension. In conferring this honour, the Queen had not so much in view the promotion of Dr. Fleming's material comfort as the wish to bestow a distinguishing honour on a brave and worthy man. Dr. Fleming is, fortunately, by no means a poor man, as he draws a pension from the Army for his great services, and the special pension now bestowed by the Crown will not very greatly increase his income, but neither he nor we, his colleagues, ought to think the less of the kindness and thoughtfulness of Her Majesty in thus bestowing a mark of her favour on one who, perhaps more than anybody else, may be regarded as the champion of the veterinary profession. If any of my readers will take the trouble to examine the veterinary calendar for the German Empire, published by Hirschwald of Berlin, he will see that

not only is the name and address of every surgeon in the empire registered therein, not only are the surgeons classified and arranged according to the posts, civil or military, which they hold, but a list is given of the orders and distinctions (*Orden und Ehrenzeichen*), by which brave and able men have been rewarded at the hands of a wise Government. In Germany there are surgeons who are entitled to wear the decoration of the Red Eagle, in four classes, the Crown in three classes, the Hohenzollern in two, and so on. Such privileges in England are conspicuously absent. It is true that Dr. Fleming is a Commander of the Bath—no mean distinction—but how many veterinary surgeons enjoy, or have enjoyed this privilege? Let us make much of our worthy colleague.

I have said that my friend George Fleming might be taken as a model of everything that a young student ought to strive after and imitate. It is not given to all of us to accomplish so much important work as Dr. Fleming has achieved. Very few have the same abilities; most of us are circumscribed in our powers, or in the sphere of our activities; it is possible that wealth may clog, or poverty may chill our better impulses; but what I say is that every student may find something in Dr. Fleming's career to encourage him in the hard battle of life, and for this we ought to be glad. Mere precepts are of little avail for the guidance of youth; a barren gospel of "thou shalt not" never produced a good or noble character; the difficulty is to discover, first, what we can and what we may do, and then how to do it thoroughly, honourably, and manfully. Let my younger readers follow the short sketch of Dr. Fleming's past career, which I append, and be of good courage. Let them read his books and fill themselves with his wisdom and learning; then, if they can obtain leave, let them visit him in his Devonshire home, and gain consolation and help from his own lips.

Dr. Fleming was born in Glasgow in 1833, and studied veterinary medicine and surgery in Edinburgh, under Professor Dick, gaining many prizes and medals during his college career. He entered the army as a veterinary surgeon in the fateful year 1855, and went through all the horrors and privations of the Crimean campaign. Not content with this, he volunteered for the Chinese expedition in 1859, and remained in China till 1861. He likewise served in Syria and Egypt in 1867, and went on from grade to grade till he became principal veterinary surgeon to the British army in 1883; from this post he retired, in 1890, with a pension.

On an important point in connection with the army, I allow Dr. Fleming to speak for himself:—

During the time I was at the War Office great attention was devoted to improvement in the health of army horses at home and abroad, by instructing veterinary officers in the principles of sanitation and stable management, the diminution of lameness and disease, as well as to the eradication of maladies of a contagious nature. The result was soon apparent in the greatly increased health and soundness of troop-horses; but the most striking and satisfactory consequence of efforts in this direction was the total suppression of glanders, which for years had caused heavy loss and great trouble to the mounted corps, and at one time was supposed to be ineradicable. For some years before my retirement until the present time, there has not been a case recorded, notwithstanding the prevalence of the contagion in the stables of civilians. No other European army is free from glanders.

The degree of Doctor of Laws was conferred by the University of his native town on Mr. Fleming in 1883, in recognition of his services to human and animal medicine, and he has been elected member of innumerable learned and scientific societies both in this country and abroad.

In concluding this very brief notice of the man who preceded me in the editorship of the VETERINARY JOURNAL, I cannot but refer to the crowning glory of Dr. Fleming's life, as regarded from the veterinary surgeon's point of view. I allow him once more to speak for himself, and with this quotation take leave of him for the moment, wishing him the enjoyment of his well-earned honours and emoluments:—

Since entering the veterinary profession, my chief object has been to raise it socially and scientifically, so as to increase it in utility and public estimation.

I was President of the Royal College of Veterinary Surgeons from 1880 to 1887, and Member of Council from 1868 to 1888; and have been a Member of the Board of Examiners from 1872 to the present time, during which period I have examined on materia medica, anatomy, pathology, and morbid anatomy.

In the long interval during which I have been connected with the Royal College, I have been the means of effecting several important reforms in the education and position of veterinary surgeons generally, among others being the institution of the degree of Fellow—a post-graduate degree calculated to stimulate Veterinary Surgeons to continue their studies after they have left College.

In 1881, at my own cost, and after much anxiety and trouble, succeeded in obtaining from Parliament the Veterinary Surgeons Act, which put the profession in a recognised and well-established position, and endowed it with similar privileges to those possessed by the Faculties of Medicine and Surgery.

OUR readers are informed that the author of the valuable contribution in our last month's issue, on the disease "Surra," was Veterinary-Captain A. F. Appleton, Inniskilling Dragoons.

THE tuberculin (referred to on page 303) test is in some danger of condemnation if heed be given to the results obtained by some veterinarians who apply it. These men state that there is sometimes no elevation of temperature when the animal is evidently tubercular, and that elevation of temperature often occurs in animals that are afterwards proved to be healthy. To the first experimentalists I wish to say that they are not to forget that elevation of temperature is not so appreciable in animals severely invaded by the disease, and in which the temperature is already elevated; to the second experimentalists, that care should be taken that the animal be properly tested before as well as after tuberculization.

I have been informed that some men who are members of the profession inoculate with tuberculin in the public market, when animals are in an excited and more or less febrile condition, and condemn or pass such animals in the course of a few hours. Such a proceeding is one of those things that bring disgrace to the veterinary profession.

Proceedings of Veterinary Medical Societies, etc.

ROYAL COUNTIES VETERINARY MEDICAL ASSOCIATION.

Annual Meeting and Dinner.

THE annual general meeting and dinner of this flourishing Association were held with great success on Friday, February 28th, at the Great Western Hotel, Reading. The chair was taken at the meeting by the President, Mr. A. L. Butters, London. and those attending included Messrs. J. F. Simpson, J.P., Maidenhead; W. J. Flanagan, Reading; H. G. Lepper, Aylesbury; H. G. Rogers, London; J. P. S. Walker, Oxford, hon. treas.; J. Sutcliffe Hurndall, London, hon. sec.; Albert Wheatley, Reading; P. Irving, Chipping Norton; R. J. Verney, Oxford; E. C. Howard, Newbury; E. P. Owen, Thame; H. Watkins-Pitchford, Blackwater; G. E. King, Abingdon; W. Hunting, London, hon. associate; Mr. Edward Bird, Theale; and Professor Macqueen, Mr. J. F. Maidment, Mr. James Rowe, and Mr. Frank W. Dowell, London, visitors.

Apologies for inability to attend were received from Sir Henry Simpson, Professors Pritchard, Williams and McCall, and twenty from other members of the Association.

The minutes of the last meeting were read by the Hon. Sec., and duly signed by the President.

New Members.

On the proposition of Mr. HOWARD, seconded by Mr. WHEATLEY, Mr. W. H. Davidson, M.R.C.V.S., and Mr. J. McKerlie, M.R.C.V.S., both of Hungerford, were unanimously elected members of the Association.

The Jubilee Memorial Fund.

Mr. J. F. SIMPSON, in accordance with notice given, proposed "That the sum of £20 be voted from the funds of this Association to the Jubilee

Memorial Fund." It appeared, he said, by their good treasurer's account that this Association had in hand a balance of £92 4s. 9d., and it occurred to him that the present was a very fit opportunity for them to dispose of some of that balance in a way which, he ventured to think, would be approved by all the members, and would certainly be very acceptable to the committee who had in hand the management of the Jubilee Memorial. They were aware that it was the intention of the Council to found scholarships, but he was not in a position to inform them of the precise nature of those scholarships, for the simple reason that the matter had been kept open in order that the committee might know the decision of the various veterinary medical associations. The fund would close on the 15th March.

Mr. IRVING had very great pleasure in seconding the motion.

The PRESIDENT remarked that the object was a very worthy one; and Mr. Walker having, as treasurer, expressed hearty approval of the proposal, the resolution was carried unanimously.

Grunting in Horses.

The circular letter of the Lincolnshire V.M.A. (read at the meeting of the Association in November, and since printed and circulated among the members), was now read by the HON. SECRETARY, and the PRESIDENT invited discussion upon it.

Mr. HURNDALL said that so far as his memory served him, the general feeling at the meeting he attended when the matter was discussed, was that the decision come to by the Lincolnshire Association, in which it was endeavoured to lay down as an axiom that grunting was a distinct evidence of unsoundness, was not favourably received at the Central Veterinary Medical Society. There were gentlemen who argued that in the first place they had no evidence as to the pathology of grunting, others said grunting was no evidence of disease unless it was accompanied by some more serious symptoms with regard to the respiratory organs, which could only be discovered by measures beyond those that were generally taken for discovering whether a horse grunted or no. It was a very common practice to threaten a horse with a stick to discover whether he emitted a sound which was called grunting, and, if so, some practitioners would not pass a horse. Others expressed the opinion that that was a very impolitic procedure, and was opening up a question concerning which there were many objections. If a horse emitted that peculiar sound called grunting, which varied very considerably under certain conditions, and if at the same time that horse gave evidence of defective respiration when put through the proper test for the same, then he would admit that grunting was a proper ground for certifying unsoundness; but unless the veterinary surgeon had some distinct proof beyond the fact that the horse grunted, he held that he was not warranted in giving an adverse opinion with regard to the soundness of that horse. He had the opportunity at the meeting of the Central Society of giving distinct proof, from his experience of a horse which he rode two seasons with the Cambridgeshire Foxhounds. That horse invariably "grunted" when he landed over a fence, but he was as sound in his wind as any horse that ever walked this earth. Plenty of other cases might be brought forward to show that it was wrong to condemn an animal on such *primâ facie* evidence. One gentleman stated a case at a meeting of the Central Society where a horse was known to emit the sound under certain conditions, but there was absolute proof that he was perfectly sound in his wind. It was necessary before condemning a horse to satisfy themselves that there was some absolute cause for the grunting. It was said by some that the majority of horses that made this peculiar noise became ultimately roarers. He himself looked on that as merely a coincidence; but

where it occurred he thought they would not find it amongst horses of the thoroughbred type, but amongst horses of the commoner type, such as those which ran in omnibuses and tramcars, and heavy cart-horses. Where such horses grunted there was room for suspicion, but even in those cases it could not of itself be accepted as proof of unsoundness. At the Central meeting the prevailing opinion of the large majority was absolutely against accepting the dictum that because a horse grunted he should be reckoned unsound; and it was, further, considered unwise for a veterinary surgeon to commit himself to any such opinion.

Mr. WALKER was astonished that any Association would agree to such a resolution. In the first place the language was incorrect, for on his mind grunting was an effect and not a cause. Grunting was not a sufficient reason for the rejection of any animal. He had been rather struck with the discussions at meetings of various societies on that question. He should say that nine-tenths of those who had spoken agreed with the idea that all grunters eventually became roarers. If that was so, grunting must be a modified form of roaring, and so, if it was a disease, it must be one and the same disease. He was not inclined to believe that. He did not think many would dispute the proposition that there were two distinct forms of grunting —a grunting that did proceed to roaring and a grunting that had no relation to roaring whatever, and consequently would never develop into it. He dared say also that most would agree that many horses would grunt through fear simply. It was a perfectly normal emission of sound from the sudden contraction of some of the muscles of the larynx, and had no relation to disease at all. If that were so, he thought it would be a great hardship to condemn a horse for emitting a little sound when tampered with. He thought it indisputable that there were many horses which grunted and yet never became roarers. Again, some seemed to be "at sea" as to whence the sound proceeded. Some even thought it was connected with the lungs. If they tested it on themselves they would easily find that this sound proceeded from the throat, and that they could not make it proceed from anywhere else. He thought the profession was practically unanimous with regard to a confirmed roarer—that the course was atrophy of the muscles of the larynx. If that was so—and he quite believed that it was—there could be no difficulty as to where the sound proceeded from. He thought there were two forms of grunting which had to be distinguished the one from the other, and that unless a horse did more than simply grunt in the ordinary way he was not an unsound horse. He moved, "That grunting being an effect, cannot be a cause of unsoundness, and that when unaccompanied by any abnormal sound or alteration of structure it is not an unsoundness, but a perfectly natural emission."

Mr. HURNDALL seconded the proposition *pro forma*, to bring it before the meeting.

Mr. SIMPSON agreed with Mr. Hurndall as to the importance of the subject. It was most important that those who had the opportunity of making what he might term a complete examination of hunters and other horses for their wind. By the term complete examination he meant not only testing them in the "rough and ready" way by striking at them with a stick, say at a repository, but also had an opportunity of galloping the animal in the plough. It was of still more importance to those who had limited opportunities of forming an opinion as to the soundness or otherwise of a horse's wind, say at a repository where there was no galloping sound. It would also apply to those who had to decide as to the soundness or otherwise of the wind of horses exhibited in show-yards. In the discussion at the Central Association one member drew the distinction between unsoundness of wind and unsoundness in other parts of the body. If he remembered rightly, it

was urged by that gentleman that the sound of grunting was evidence of some internal disease, it might be of the abdominal or of the thoracic viscera, but he would not pledge himself to say it was evidence of unsoundness of wind. He (Mr. Simpson) viewed it as a very dangerous course to take to deliberately amongst themselves declare that every sound which might be termed grunting was evidence of unsoundness of wind, which was, he took it, how the Lincolnshire Association applied the term. Where were they to draw the line? As Mr. Walker had well said, there were many sounds emitted when a horse was struck. If a horse gave that uncontrolled prolonged grunt which in "horsey" circles was called "bulling," that horse ought in his opinion to be condemned, because 99 out of every 100 horses galloped after such a sound had been obtained from them would roar. But there were also, as Mr. Walker said, such sounds as might be obtained from the human being. Such a sound might raise a little suspicion in the mind of the examiner, but that alone should not justify any veterinary surgeon in condemning a horse as being unsound in wind. They wanted some confirmatory evidence before they proceeded to condemn that horse. In his opinion, if a horse, in addition to emitting that sound, had what he might call a soft, prolonged cough when pressure was applied to the larynx, that would rouse his suspicions. If in addition to that he failed, without great pressure, to obtain response to his pressure on the larynx, he should still have greater suspicion of that animal; and on no account would he, having those three circumstances before him, give a sound certificate without the opportunity of galloping the horse. But in the absence of the two last pieces of evidence and the presence of the first, he thought no veterinary surgeon would be justified in condemning a horse. No one could fail, if he tried hard enough, to get a sound of some kind from every horse on striking him with a stick. Therein lay the danger. A veterinary surgeon passed a horse, having tested him moderately. He might have failed to get a sound with any ordinary test, or by galloping. But a man who was determined to get a sound of some kind would succeed. What would happen afterwards should the purchaser of that horse be dissatisfied in any way with the animal and desire to make the veterinary surgeon responsible for having, as he would say, made a mistake? He would get a noise out of that animal. Although litigation occasionally arose now as to the soundness of a horse's wind, he ventured to think if they adopted such a resolution as that of the Lincolnshire Association it would increase their difficulties tenfold. At the same time, he did not altogether approve of Mr. Walker's motion, and he therefore proposed as an amendment "That in the opinion of this meeting grunting alone is not necessarily an evidence of unsoundness."

Mr. OWEN seconded the amendment.

Professor MACQUEEN, who was asked to join in the discussion, said he had already exhausted all he had to say on the subject, but he might repeat some of the statements he had previously made. He held what he would not term dogmatic views, but views which he had arrived at after very fair consideration of the subject. They had heard that day, and they had read in the reported discussions, that there were two kinds of grunting—the grunting that was associated usually with some defects of wind, and the grunting that was of no consequence whatever. Before proceeding with the subject he wished to make the remark that they would observe that those who maintained that grunting had some connection with defects of wind, were most careful to leave out of consideration the existence of its connection with whistling. They always said there was a grunting characteristic of roaring, but no one had yet asserted that there was a grunting connected with whistling. With regard to grunting, he went entirely against the Lincolnshire Association. He did not believe that grunting necessarily indicated unsoundness of wind. What it could be explained to be was quite another matter. In connection with that

point some had gone the length of admitting that there was a special or exaggerated form of grunting. He was not inclined to restrict the term to any special form, but those who believed it was of importance, maintained that grunting was generally noticed in horses that were unsound in their wind. That had not been his experience; but if it had been his experience he would like to ask those pro-grunting individuals if they were prepared to maintain the converse statement—that if a horse did not grunt to a stick he was therefore to be considered sound of wind? That was a rather important point, especially in repositories. He was himself prepared to deny both propositions: in other words, he fell back upon Mr. Simpson's statement that grunting was not necessarily evidence of defective wind. Since this question had been raised by the Lincolnshire Association he had taken occasion to make a few notes, and—although he was not inclined to rely very much upon statistics—he still maintained that from what he had gathered at least 66 per cent. of horses unsound in their wind, either from roaring or whistling, did not make a noise to a stick. That was rather a large statement, but those who examined horses by galloping them, and would take the trouble to test the same horses by threatening with a stick, would find it was so. Then there was the opposite condition—that a horse which when threatened emitted a sound did not roar when galloped. The late Mr. Youatt, who was credited as the first authority to pay attention to roaring, looked on grunting and roaring as synonymous; but he confessed that the mere testing of a horse's wind by threatening with a stick was most unreliable. Professor Williams did not look upon grunting as a very important defect; and General FitzWygram admitted that a horse with an overloaded stomach would grunt when threatened with a stick. In other publications the condition called grunting occupied a very small space, being merely referred to in the text-books. Oliphant no doubt mentioned that grunting was unsoundness, but he gave nothing in support of it, and Youatt did not mention it. The French and German writers did not recognise it at all. He did not believe the profession would ever be in agreement upon the question, and did not think it would be wise to come to any such decision. He thought every member had a perfect right to exercise his own judgment, and, if he thought it necessary for his own protection, he should mention that a horse grunted. He did not see that this discussion would ever bring about unanimity in the examination of horses' wind, but it would do good by drawing attention to the point.

Mr. HURNDALL, after Mr. Simpson's remarks, invited Mr. Walker to withdraw his resolution in favour of the amendment. Mr. Walker had made two remarks anent roaring which his (the speaker's) experience did not confirm. He said that the veterinary profession generally admitted that roaring was due to atrophy of the muscles of the larynx. His experience, based on *post-mortem* examinations, was that in heavy-class horses the statement was a correct one, but that in thoroughbred or better class horses it did not apply. He was satisfied that roaring did very often come from the lungs, and that the larynx was not defective. Moreover, he was satisfied that a horse suffering from roaring was capable of being cured, or at any rate very materially alleviated, by medical treatment, a proof of which he received about a week ago. He believed that with better class and thoroughbred horses the larynx was rarely the cause of the disease.

Mr. WALKER agreed to withdraw his resolution in favour of the amendment.

The PRESIDENT said that, having given the matter some consideration, he quite agreed with Mr. Simpson that grunting was not necessarily evidence of unsoundness. At the same time, speaking from his own experience, horses that grunted should be looked on with suspicion.

After some remarks from Mr. Lepper and Mr. Verney, Mr. Simpson's resolution was carried *nem. con.*

The Proposed Representative Union.

The Hon. SECRETARY read the circular letter addressed to him by Professor Macqueen.

Mr. SIMPSON proposed the appointment of a committee, considering Professor Macqueen's suggestion an admirable one in the interests of all local societies. It was, however, anything but advisable in the interests of the National Society, unless there were very considerable modifications of the suggestions. Taking No. II., for instance, "All effective members of affiliated societies should become, by virtue of affiliation, effective members of the National Veterinary Association, without further individual subscriptions," he thought they would readily see the effect of it if adopted, because it was pretty well known that most members of the profession who interested themselves in the National were also members of local societies; and in these days of bicycles and horseless carriages, half-guineas will be studied more and more. At the same time, he thought it so important that they should have a Central Association to which they could look in times of necessity for guidance that he most willingly proposed the appintment of a committee to consider the subject.

Mr. HURNDALL seconded the motion, observing that there appeared, as Mr. Simpson had suggested, some little difficulty as regarded subscriptions on the face of it. Some years ago he submitted to the press somewhat similar ideas, suggesting also the establishment of a quarterly journal in connection with the National Association, which should be looked on as the leading journal of the profession, and in which all matters connected with the profession might have full ventilation.

The resolution was carried unanimously; and Mr. Simpson then proposed that the President, the vice-presidents, the hon. sec., and the hon. treasurer form the committee.

Professor MACQUEEN explained that the letter was entirely an unofficial communication. It was simply the result of a remark in a speech by Mr. Wartnaby, and was entirely private and unofficial. He had sent similar letters to all the Societies in England and Scotland, and also to the President of the Society that met in Dublin, and wherever the letter had been read, it had been received with favour, and a committee had been ppointed. When he received intimation that the Societies had all appointed committees, as he hoped would be the case, he should be bold enough to invite those committees to meet together at a central place, or to send representatives, to confer. Without such a conference he did not think it was possible to go very far. If they could get over the financial difficulty, he believed that professional union would be one of the best things that had ever taken place in the profession.

The resolution was unanimously passed by the meeting:

Place of next Meeting.

On the very kind invitation of Mr. Lepper the Association unanimously resolved, the requisite motion having been proposed by Mr. Hurndall, and seconded by Mr. Flanagan, to hold the next (the summer) meeting at Aylesbury, on the first Friday in July.

The President of the College and the Council.

Mr. HURNDALL said they had the honour of having the President of the Royal College as one of their members; and he believed he would be seeking re-election on the council. It had occurred to him that it would be a grateful act on their part to issue a circular asking other veterinary medical associations to support Mr. Jas. Simpson.

The PRESIDENT proposed "That this Association nominate Mr. James Simpson for re-election as a member of the council of the Royal College, and ask the other Associations to support him as far as they possibly can, so as to secure his re-election."

Mr. HURNDALL seconded, and the motion was carried with enthusiastic unanimity, and briefly acknowledged by Mr. James Simpson.

Mr. HUNTING showed a very interesting photograph of a supposed fracture of the first rib.

Presidential Address.

Gentlemen,—It is customary for the presidents to choose for their inaugural address topics of general rather than exclusively scientific interest, but in following this custom I find it difficult to select a subject which has not already been touched upon by able hands. As our time is limited, I will confine my remarks to veterinary medical societies, although I fear what I have to say about them may be considered like a thrice told tale. Judging from the accounts of their various meetings given in our professional journals, I consider they are very popular. Perhaps some may differ from this view on the score that the aggregate attendance at the meetings represents only a very small proportion of the whole profession, but when we consider the difficulties which the great majority of our professional brethren experience in getting away from their practices, the wonder is that the meetings are so well attended. The reason for their popularity, however. is not far to seek, and is to be found in the benefits which the members derive from them. Among other things, they acquire in the pleasantest way possible much useful medical and scientific knowledge. Not only are they benefitted at the meeting itself, but also by the social chat before and after it. They then hear their neighbours' troubles with cases and clients, and how they overcome their difficulties; or may pour their own perplexities into the sympathetic ear of a professional brother who may suggest a remedy.

Besides the reading and discussing of papers on scientific subjects, the exhibition of morbid specimens, etc., I should like to see in this Association, occasionally at least, a further development of our usefulness. I cannot better illustrate my meaning than by referring to the letter of the Lincolnshire Veterinary Medical Society on "Grunting." To assist in elucidating and determining the pathology of his dtisease, if I may so term it, a horse, or horses, grunters, could have been procured, tested in the presence of the members, then slaughtered and the *post-mortem* lesions, if any, observed and recorded. This would serve as an object lesson of great value to the members present. I say to members present, because it must always be borne in mind that through the medium of our periodicals, in our papers and discussions on them we speak to a much larger audience than is assembled in the four walls of this room; whereas by experiments such as those indicated the advantages are confined to those who witness them. They see the animals, note their condition, distinguish the sounds, and also the *post-mortem* appearances, and all this in a better way than could be described by the cleverest pen or pencil. To carry out these experiments requires funds, and this a point which I think deserves some consideration as to how much or how little could be devoted to these purposes.

There is another matter to which I wish to direct your attention, and it also has relation to the funds. As a man's character is frequently judged by the company he keeps, so also is a society's by the objects which it endeavours to attain. The aims and objects of this Association are high and worthy, but I think it might with honour to itself and advantage to its members widen them a little by identifying itself with another of a purely philanthropic character, I allude to the National Veterinary Benevolent Society. This Society was

formed, as most of you are aware, 31 years ago, for the purpose of raising a fund to be devoted to the relief of such of its members as fell into distressed circumstances, their widows or families. It was formed in conjunction with another of like principles but for a different purpose, viz., the protection of its members from unjustifiable and oppressive lawsuits, by giving them professional and pecuniary assistance and support. Of this latter society I shall at present say nothing, beyond recommending it to your favourable notice. I would, however, recommend this Association to become identified with the Benevolent Society by making a small donation, say £20, to it. In return we should obtain in perpetuity a voice and vote in the distribution of its funds. It has done good work in the past, although not so extensively as its founders would have wished, owing to the limited number who have joined it. It is true that cases requiring assistance may not frequently be brought to the notice of the profession, but the number of applicants to this Society for relief has fully demonstrated the necessity for its existence, and also for a wider membership. Besides grants of money, the Society has been able to assist in other ways. Some years ago the son of a deceased veterinary surgeon, being desirous of following his father's profession yut unable to do so for want of funds to pay his college fees, applied to the Society, although not entitled to its benefits. They made a representation to the different schools when they all, I believe (there may have been one exception) generously offered to educate him free, and already the orphans of three veterinary surgeons have been, through their influence, so educated. Now I think you will all agree with me that a society doing this good work is worthy of support. Some may think its officers have been a little remiss in not keeping its claims constantly before the notice of the profession, but they have carefully husbanded its funds, and have themselves defrayed all the working expenses. It is owing to this fact that it has now an invested capital of over £3,000. As I before stated, the number of applicants for relief have fully demonstrated in the past the absolute necessity for such a society, and as the struggle for existence is yearly becoming keener, owing to competition and increased membership, we fear that the claims upon it will in the future be increased rather than diminished. It behoves us therefore as an Association, and as members of an honourable and learned body, to carefully consider this matter, and *noblesse oblige*, to act up to the highest standard.

While it is our ambitious desire for the profession to attain a place in the fore front of learned and scientific bodies, we should not neglect those duties which the thoughtful consider are due to the unfortunate, ever remembering that by making provision for the probable wants of the widow and fatherless we add to our own as well as their happiness, and also tend to elevate the status of our profession in the eyes of all good and right thinking people.

Mr. WALKER proposed and Mr. WHEATLEY seconded a very hearty vote of thanks to the President for his address, and the same was carried by acclamation.

The PRESIDENT said a word of cordial thanks, and the members, who were joined by Messrs. Giles Ayres, R. L. Clarke, J. A. Craft, W. Bonney, E. K. Deacon, Mus. Bac., and other gentlemen, adjourned to the new coffee room of the hotel for the annual dinner.

The Dinner,

To which over 30 gentlemen sat down, was served in the style for which the hotel it famous.

The CHAIRMAN gave the loyal toasts. The Prince of Wales, he said, took great interest in agriculture and sport, and altogether fulfilled the ideal of a country gentlemen, independent of his positton as heir to the Throne. The veterinary profession had good reason to drink that toast with enthusiasm,

for his Royal Highness was a patron of the College, and frequently attended meetings there, taking a great personal interest in the profession.

Mr. LEPPER submitted the next toast, that of "The Sea and Land Forces," and said no words could express the gratitude they felt towards the Services. He hoped the navy would be so strengthened that it would exceed the navies of any two other powers; and our army in point of efficiency, discipline, and equipment, could equal the large armies of the continent, although, of course, not in numbers. They were glad to welcome back the Ashanti expedition from their bloodless campaign, the organisation of which had been very thorough and efficient. A notable feature was our volunteer force, which now numbered 200,000, and there were many thousands of men in the prime of life who had served as volunteers, and would quickly rejoin the colours if required. He had himself belonged to the Bucks Yeomanry for 20 years, and was certain that if the Yeomanry regiments of England were only drilled for one month they would equal in every respect the regulars. He coupled with the toast the name of Quarter-master Giles Ayres, of the Berks Yeomanry, who was an old yeoman and an old vet., and had served his country in many ways.

Quarter-master AYRES, responding, said that after the recent remarks of the Commander-in-Chief they might feel satisfied that the navy and army were in a good position.

Mr. DOWELL proposed "Success to the Royal Counties' Veterinary Medical Association" in a neat speech. Having been present at the meeting that afternoon, and then at the dinner, there could be no doubt of the success of the Association. He felt deeply indebted to his friend, Mr. Rogers, for having asked him to come there that day, because it had not only enabled him to spend a pleasant afternoon, but also to see the working of one of the chief veterinary medical associations outside London.

The PRESIDENT responded, and said he had the good of the Association at heart, and certainly should not spare himself in any way to promote its success. He must remind them that very much of the success of an association depended upon its permanent officers; and he thought that Association from its commencement had been one continued success. Some meetings might not have been attended so well as others, but when they considered the earnest attention that veterinary surgeons paid to their business, and the enthusiasm which they showed in the profession, he thought they attended very well. Anything in his power to make that Association a success he should not fail to do.

Mr. HUNTING ably proposed the next toast, that of "The Veterinary Profession." In a mixed audience of that kind, he said, one who did not know the visitors might be a little puzzled as to how best to treat the subject of that toast; but he was saved that trouble, because every visitor with them that day was a sporting man, and to sporting men there was very little necessity to insist on the good work done by members of the Royal College of Veterinary Surgeons. The members of the profession looked to the owners of horses, cattle, and dogs for appreciation of their work. The individual public always treated them well, and thoroughly appreciated the services they were able to render. But as a collective body they looked to the State for some appreciation too. There was, a short time ago, a State Department of Veterinary Surgeons, which was "run" by veterinary surgeons, and its work was well done. Unfortunately—and as a good Radical he said it with a sense of shame—a Liberal Government deposed them from their proper place, and put at their head retired military and naval officers. But time always brought its revenges. They had been trying now some 2½ years at only one disease—swine fever—and they had actually grown and developed that disease, and increased its spread in the country; and they had killed, under the guidance of non-profes-

sional men, more pigs than the disease itself. A short time ago the new Minister of Agriculture invited the Local Authorities to send representatives to a conference; and every one of those local representatives told him that the Board of Agriculture had failed miserably, owing to the incapacity of the officers and to the delay incurred by their arrangements. He was glad to see that, only within the last day or two, Mr. Walter Long had seen the error of his ways, and was now going to treat the local veterinary surgeon as the only man to whom they could trust for the stamping out of disease. When he had diagnosed the disease he would act at once, and not as heretofore be a mere "tripe-washer" to send the "tripe" up to London to have it verified. They could not lock the stable door then. The veterinary profession, resuming its proper position in the state, and having always maintained its proper position with the public, he thought was now in a position for which every member should be grateful and proud. He had to couple with that toast the name of Mr. James Simpson, the President of the College. He did so with very great pleasure, because he himself knew something of the difficulties of the position, and also because, having seen a good deal of Mr. Simpson's ways, he knew that he was one of the most energetic Presidents the College had ever had. He spared himself never, and he possessed a most enviable tact in the way in which he did his work.

Mr. SIMPSON returned thanks. He assured them he appreciated very highly the honour of the position he occupied that night as the mouthpiece of the veterinary profession. He called to mind that last year the gentleman who had now proposed that toast occupied the position of President of the College, and it was in their recollection that he made a very excellent speech. It was the duty of every member of the profession to try and keep it to the fore. The Council did him the honour to elect him as President, and he was bound to say he agreed with Mr. Hunting in one thing. He had been far too generous in his remarks with regard to himself (the speaker), but he had certainly told the absolute truth when he said that he would, during the time he occupied that honourable position, endeavour to do his level best to obtain for the profession the recognition it undoubtedly deserved. Mr. Hunting had referred to a position which was once occupied by the profession, which they claimed to be honourable in the State. He was in a position, perhaps, that night to say something which they had not heard before. They might remember that some time ago the Council of the College decided that a deputation should wait on the President of the Board of Agriculture, to represent to him the views entertained by the members of the profession. Mr. Long did not see his way to receive a deputation, and perhaps he was wise in that, because, as they knew, the reception of a deputation meant publicity; and Mr. Long, perhaps with a desire to assist the profession, was anxious to hear from an individual the views of its members. The Council decided that he (Mr. Simpson) as the President of the College, should wait on the President of the Board of Agriculture, and he did so. Although he was not at liberty to tell them all the details until he had reported to his Council, he did feel at liberty to tell them that he was received most courteously by Mr. Long, and that he gave him the most patient and considerate attention he could possibly have hoped for. When he told them that it occupied him nearly an hour to tell him his tale, they would understand he had a good deal to say. When a Minister of the State could afford to give an hour to an individual, he must, indeed, be considered a patient and an interested man. He laid before Mr. Long all, or nearly all, the grievances entertained by members of the profession. The Council desired him to call Mr. Long's attention to three facts, viz., that the Veterinary Department had been practically abolished; that there was no professional man as director at the head of that department; and that the staff at the Board was insufficient

to deal with the diseases which were raging at the present time. He drew Mr. Long's attention to the fact that for 12 years, down to 1878, the Privy Council had a veterinary department which was presided over by a layman. The failure of the Department then to cope with disease was so apparent to the Duke of Richmond, that he determined, when he came into office, to appoint a veterinary director with all the necessary staff; and the result of that change was well-known not only throughout England but throughout the world. It was that cattle plague, pleuro-pneumonia, sheep-pox, and other diseases were practically swept away from our country. He (the speaker) ventured to compare the condition of affairs now with those under the veterinary director, because the changes of which they had now so much reason to complain, took place after the retirement of Professor Brown from the Department. No sooner did Professor Brown retire, and a lay director was appointed to preside over what was called "The Animals Division," than swine fever, glanders and farcy, rabies, and other diseases unmistakably increased enormously. Even the authorities at the Board of Agriculture would not deny that fact. The monthly statistics proved that from the date of the appointment of a layman to the Animals' Department, those diseases had increased enormously. He must not tell them all that transpired; but he came away from that interview satisfied that they had in Mr. Long a very different man to what they had in Mr. Gardner, and he confidently believed that Mr. Long would do his level best, because quoting his very words, "it would be futile for any department of the State to deal with disease unless we had not only the assistance but the very hearty co-operation of the members of your noble profession." When a Minister of the State used those words, and told him theirs was a profession he admired and respected, and that amongst its ranks he could reckon a large number of his personal friends, he felt sure it was Mr. Long's intention to do his best to sweep away some of the causes of the irritation which existed now in the veterinary profession as against the Board of Agriculture. Mr. Simpson then referred to the approaching election of members of Council, thanking those present for the support offered him in his candidature, and assuring that if he were successful he would do his best in the interests of the profession. The duties of a councillor and of a president now were very different to what they were some years ago, as he showed by giving some particulars of the work of the Registration Committee. He ventured to think that the profession was never in its history more respected than it was at the present time: and he need not remind them that it depended upon the individual members to obtain for it still greater respect. He felt sure he was not appealing to an unsympathetic audience when he asked them to assist their Council in every possible way by doing all they could to bring the profession to the front, and to claim and demand for it that recognition which it undoubtedly deserved.

Mr. HURNDALL, in proposing "The Visitors," said they numbered among their guests that night gentlemen of high social position and associated with "the sport of kings." The presence of such distinguished visitors showed the esteem felt towards the members of the profession. As Mr. Hunting and Mr. Simpson had pointed out, the failure to perform the necessary duties for the protection of the stock-owning public by the late Government was greatly to be regretted. He coupled with the toast the name of Mr. Bird, who represented one of the best racing establishments in England.

Mr. BIRD suitably replied to the toast.

Mr. ROWE gave "The President and Officers of the R.C.V.M.A." in a neat speech, and Mr. Walker and Mr. Hurndall suitably responded.

The enjoyment of the evening was greatly enhanced by songs from Messrs. Bonny, Hurndall, Cottrell, Pitchford, Ayres, Owen, and Wheatley, and recitations by Mr. Maidment, and piano solos by Mr. Deacon.

BORDER COUNTIES VETERINARY MEDICAL ASSOCIATION.

THE Annual Meeting of this Association was held at "George" Hotel, Penrith, on Friday, 13th of March. There were present:—Mr. John Armstrong (President Elect), Penrith; Professor W. O. Williams, Edinburgh; Mr. H. Thompson, Aspatria; Mr. Lindsay, Dumfries; Mr. Garnett, Windermere; Mr. Carter, President of Lancashire Association; Mr. McKie, Carlisle; Mr. Threlkeld, Kirkoswald; Mr. Martin, Appleby; and Mr. J. W. Hewson, Carlisle, Secretary.

In the absence of the President (Mr. Soulsby), Mr. THOMPSON formally moved that Mr. Armstrong occupy the Presidential Chair for the ensuing year. He congratulated Mr. Armstrong on his recovery from a very severe accident which he met with a few months ago.

Mr. ARMSTRONG, in taking the Chair, thanked the Association for the honourable position to which they had elected him. They had done a lot of good work in the past, and he hoped that in the future they would keep the Association up to the same level.

Mr. GARNETT moved that the Association pass a vote of condolence with Mr. Pears, Penrith; Mr. Thompson, Aspatria; and Mr. Armstrong, Penrith, for recent bereavements in their families.

Mr. HEWSON seconded the motion, which was unanimously agreed to.

The PRESIDENT and Mr. THOMPSON briefly expressed their thanks, the former observing that Mr. Pears had suffered a very great loss, two of his daughters, up to womanhood, having died, while a third was very ill.

Mr. THOMPSON made a statement as to the finances of the Association, from which it appeared that, if all outstanding subscriptions were paid in, the Association would have a balance of £15 10*s.* 7*d.* to the good, clear of all expenses. At Mr. Thompson's request, a resolution was passed that the accounts be yearly audited by the President.

The PRESIDENT said they had received notice of the next election of Councilmen, and he would like to have the feeling of the meeting as to what should be done. Mr. Thompson was one of those who would have to be re-nominated.

Mr. GARNETT proposed that the Association nominate Mr. Thompson for re-election. They all knew his views, which were always for the advancement and the good of the profession. He had attended well to his duties, considering the distance he had to go. It was a great drawback to provincial veterinary surgeons that they could not possibly attend every meeting. Still, he did not think, as the bye-laws of the College stood at present, that they should be in regular attendance, unless some radical change took place. It was a great draw on the country members to have to pay £5 or £6 in expenses every time there was a meeting. Some regulations should be made by which the members should be paid a certain sum towards their expenses.

The PRESIDENT seconded Mr. Thompson's nomination, and said he happened to know his views on certain subjects, and the one great thing he was backing up was distribution over the various districts, which was what the Association ought to go in for in connection with the Council. They were not sufficintly represented in the north.

Mr. THOMPSON thanked the Association for the honour which they proposed. He saw he was one of the six out of fourteen retiring members who had been balloted for to return along with Professor McCall and Mr. James Simpson. He had not attended the meetings of the council as regularly as he would have liked, because he had various offices outside of his profession which took up a great deal of time. He was therefore not in a position to devote the time and attention to veterinary politics that he would like to do. He had said little at the meetings but had voted for what he considered the best measures. He had come to the conclusion that if Mr. Balfour would step

down from the House of Commons to the board room of the Royal College of Veterinary Surgeons, and put on the gag and limit the time of speechifying, he would do a great deal of good. He did not think the profession was properly represented on the council board, nor would it be so until they had electoral divisions and he would like also to advocate the payment to members of, say, second class railway fare to and from London when engaged there on council business. A country practitioner could not afford to spend £30 or £40 a year in expenses at these meetings, and in addition having to travel something like 600 miles and take two or three days to it. He questioned very much whether those gentlemen living in London and the immediate vicinity would attend the council meetings as often as they did, if they had to leave their work for two or three days, four or five times a year, and be out of pocket £5 or £6 a year. It was an easy matter for them to jump into a penny 'bus, go to the meetings and get back home at night. Another matter he would like to draw attention to was the manner in which motions were carried at the council meetings. If a motion was passed in committee it came up afterwards at the general board and it was again discussed and voted on. He submitted that if a motion was carried by a majority it ought to be there and then made law or left over to the next quarterly meeting. He did not see the force of wasting all the time in committee and at the general board, when the subject had to come up again in fourteen days to be confirmed, and if the parties were not there to support it, those who were oppposed to it attended and the motion was thrown out and lost. This wanted reforming. He would also recommend that the Principals of the teaching schools be ex-officio members of the board. They should not be subjected to the vote; they were required on the council for expression of their views and to advocate measures for the efficient teaching of students. He was not in favour of other members of the college teaching staff being on the council. There were too many from the London College on the council now. With reference to the educational question, that had been going on for a long time. He thought they were going a little too far and making the education too expensive for country veterinary surgeons and to raise the curriculum to four years was a great drawback for original earnest men joining the profession. What with the microscope and bacteriology, he was afraid they were forgetting to teach the hand and eye together in real practical work. They were forgetting observation, originality and practicability, which were the three great points—the foster-mothers of science. Look at the last examination at Christmas, when only 18 students from the four colleges passed their first professional or A. examination, and compare with the examination of May 1892, when 110 passed their first professional. If these 18 students are what the 22 examiners have to look forward to, he was afraid it was like killing the goose that laid the golden eggs. He regretted that from having so many occupations he could not see his way clear to offer himself for re-election, if the North of England was to be represented, they had good men in Newcastle, or they might select one from the border counties if they thought proper.

Professor W. O. WILLIAMS said the Scottish Metropolitan Association decided last week to support Mr. Thompson as a North of England man; and they also decided to ask the Council to devote so much money to the payment of travelling expenses. He did not agree with Mr. Thompson in the suggestion that there should be only one from each college on the Council. His father and he had made it a matter of honour that they would never go to a Council meeting together if they could help it, so as to have a double vote. It was only in a matter of emergency that they did go together, and he did not think that they had been twice to London together during the past two years. He knew that Mr. Thompson was not driving at the Scottish colleges,

Mr. THOMPSON said, in conclusion, that under the circumstances he would take time to consider whether he would stand or not.

Mr. GARNETT'S motion, being put by the President, was carried unanimously.

The SECRETARY read a letter from the South Durham and North Yorkshire Association asking the support of the Border Counties' Association in favour of their nominee, Mr. J. E. Peel, F.R.C.V.S., J.P., who retired from the Council, but offered himself for re-election. The Association felt that in Mr. Peel they had an able representative of provincial veterinary surgeons in the North of England.

Mr. HEWSON moved that this Society endeavour to amalgamate with the South Durham and North Yorkshire, the Scottish Metropolitan, the Lancashire, and the Northumberland, in order to secure the election of their respective candidates.

Mr. LINDSAY seconded the motion, which was agreed to.

On the motion of Mr. THOMPSON, seconded by Mr. HEWSON, and supported by the PRESIDENT, it was agreed to contribute £2 2s. towards the memorial which is being promoted for the late Professor Walley, who had been one of the hon. members of the Association and had given them several papers.

Mr. J. Donald, Wigton, had given notice of a motion for dispensing with the services of a private reporter at the Association meetings and throwing the meetings open to reporters of the professional journals. Mr. Donald was unable to attend the meeting, and on the motion of Mr. GARNETT, seconded by Mr. MCKIE, it was decided not to grant Mr. Donald's request that the motion should again be postponed. It was, consequently, struck out.

The President's address was the next subject upon the agenda; but the PRESIDENT said he had not prepared an address. These addresses, to his mind, simply meant thrashing out old things over and over again. He determined, instead, to bring one or two matters before the attention of the members. One was in connection with the Royal Society for the Prevention of Cruelty to Animals. There had lately occurred in the district one or two cases which showed the desirability of veterinary surgeons combining in their own defence. About three months ago one of the inspectors of the R.S.P.C.A. attempted to dictate to a veterinary surgeon as to whether a certain horse was lame or not. That inspector, he believed, was by trade a tailor. Yet he considered himself fit to dictate to a qualified veterinary surgeon. But he found his level in the court, when his case was dismissed. It was really a case of old standing ringbone. He next referred to two cases of umbilical hernia. The first case was in January, 1892, when Mr. Hewson, who was then his (the President's) assistant, was called to attend a yearling filly. She had a large piece of bowel through, and there was a considerable amount of local swelling. An abscess formed, and burst on the 25th January, and discharged ingesta until February 3rd. After that the wound healed, the hernia disappeared, and the mare was now a good useful brood mare. The treatment consisted simply of cleaniness, a strong antiseptic being used. Professor Walley's favourite liniment was used, equal parts of turpentine and rape oil, and two drams of creasote to the eight ounces, and round the swelling the ordinary white liniment. An analagous case came under his notice on the 28th November, 1894. A mare, the property of Mrs. Bell, of Thomas Close, was very stiff, and had a considerable amount of swelling under her belly. At first, he did not detect the hernia owing to the swelling, and it was only on his second visit that he found an opening. He pressed the bowel back, and bandaged the place. The mare suffered much pain, and her temperature rose to 107°. She was treated with sedatives in the ordinary way, but he could not relieve the pain. The result was an abscess which burst, and ingesta was discharged for four days, a considerable quantity coming through the opening—at least four quarts.

Remembering the first case, he treated this one in exactly the same way, except that the first case was not feverish. That mare went on well, and had now gone to London as a trammer. He considered that these cases were unique.

Mr. THOMPSON said he had met with several cases of umbical and ventral hernia. It was rather unique to have a common opening into the bowel and make such a nice recovery. He thought it was a matter which might be deferred for discussion at next meeting, so that they might consider this subject in the meantime.

Mr. HEWSON said he distinctly remembered the first case mentioned by the President. It was a yearling filly, and was noticed from birth to have umbilical hernia. He was suprised when the abscess burst to find ingesta coming distinctly from the bowel. He thought the discharge would amount to three quarts a day. His first impression was that the case was hopeless. The feed was regulated to a certain extent, and was either boiled or scalded, and the dressing was a very stimulating one.

Mr. CARTER recalled a case in his experience of ventral hernia, ingesta coming from the wound. The animal died, however. He never heard of their recovering before.

Mr. LINDSAY said he attended a two-year-old colt which had burst an abscess below its belly. He told the owner he might as well send the animal to the knacker's yard. The man kept the horse and treated it, and within three weeks the wound was healed. Another case was from Mr. Graham, of Harelawhill, and was a foal which had umbilical hernia. He promised to put a truss on it, but in the interval it burst. Ingesta came from the opening. He advised the owner to leave it alone, and the wound healed up and the rupture disappeared.

Mr. THOMPSON said last Thursday a hunter stuck himself on a post in a fence, half-way between the sheath and the inside of the thigh; the skin was not broken. Next morning, after a gallop, the bowels protruded and extended under the skin along the flank and belly. He manipulated them back and got the swelling reduced, put on bandages with horse-hair pads, and yesterday morning the horse was doing nicely, but how the case would end he could not tell.

Mr. GARNETT said to his mind it was a question whether the abscesses were due to hernia or not. He knew a case where a large abscess was formed which might be taken for umbilical hernia. The animal was eight or nine months old, and was off its food. He opened the swelling and a pint of thick matter came away. He treated antiseptically and syringed once or twice a day. There was no opening into the bowel, and in the course of a week or ten days the wound was entirely healed. Were they really causes of hernia, or did some abscess form at the point of the umbilicus and connect in some way with the coats of the intestine, and really in these cases was there protrusion of the intestine through the muscles of the belly?

The PRESIDENT said in the cases he had quoted it was direct hernia.

Mr. THOMPSON: The ingesta proves that.

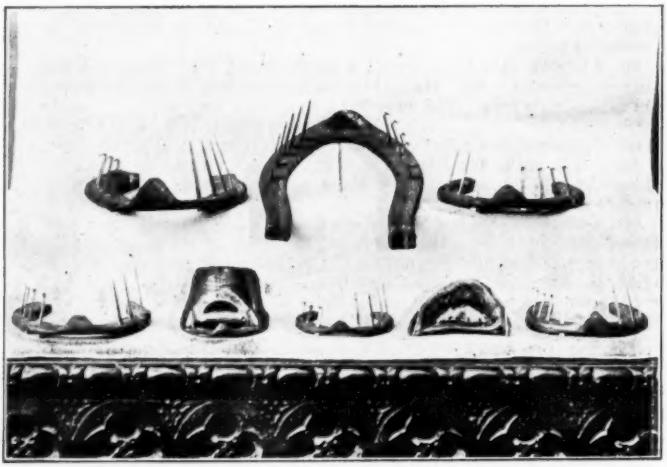
It was agreed that the subject should be left over for further discussion.

The adjourned discussion on Mr. Park's paper on "Schirrous Cord" was also postponed, Mr. Park being absent in Paris, where he is undergoing the Pasteur treatment for an injury inflicted by a dog which died of dumb rabies.

Mr. THOMPSON, Aspatria, then introduced his subjects on horse-shoeing and castration and said: I have two objects in bringing this matter before you. The case is this. On July 25th, 1895, Mr. Nicholas Bird, shoeing smith, Workington, was sued in the county court of that town for the full value of a pony said to have been "*ruined for life* by five nails out of six being driven too near the sensitive parts." It was stated in evidence that the pony was shod on April

19th, yet no complaint was made until May 21st, 12 days afterwards; when the shoe was removed nothing was seen or found in the foot. On July 23rd, Mr. Bird asked me to examine the pony in company with Mr. Charles Ward, M.R.C.V.S., and on July 24th, the day before the trial, or 85 days after the pony had been noticed lame, we had the shoe taken off the hind-foot and found a good strong hoof, the crust and sole being overgrown. The sole and ground surface of the wall were slightly pared, but there were no indications of the foot having been searched for prick or "gravel," nor yet were there any traces of old nails noticeable, the only holes in the crust being those belonging to the shoe we had just removed. The pony was going sound, but had bony enlargements and partial low ringbone on the inside of both pastern joints.

The first point I want to bring before you is the direction of the nail holes in the shoe and the nails in the hoof. In court a shoe was handed to me with some nails. On putting the nails into the holes in the shoe their points



inclined inwards, and looked rather dangerous, just like those specimens before me. In my evidence I said "I saw nothing amiss with the direction of the nails or the nail holes in the shoe. The nails must incline inwards in keeping with the angle of the foot, so as to get a proper hold of the crust." Mr. Soulsby, sen., Whitehaven, also gave evidence for the defendant Bird, and in his cross-examination said that "the nail holes in the shoe and the nails themselves inclined obliquely outwards." I was astonished to hear this, as it appeared to be against the common law of mechanics. Referring to Dr. Fleming's prize essay on Practical Horse-shoeing, which was placed in my hand on leaving the court, I was astonished to see a diagram showing the direction in which the nails had to run, and also the following instructions:—"The nail holes may be stamped *coarse* in order to take a short but solid hold of it by driving the nails *obliquely outwards*, as figure 19; but on looking at the figure I found the nail hole on the *inside margin of the web of the shoe* —the Arab style of nailing. On reaching home I hunted up some other

writers, and was still more surprised to read in Fitzwygram, chap. 3, para. 974, that "the nail holes should be punched rather nearer the inside of the shoe, and should be brought out at the upper side with a slight inclination *outwards*, so as to diminish the chance of pricking."

Now, when men like Dr. Fleming and General Sir F. Fitzwygram, both well known writers, tell us that the nail should be nearer the inside margin of the web of the shoe, and incline obliquely outwards, it is time, I think, to draw attention to the practical fact that such is not the case. Professor Williams says "the nails should be as nearly straight up and down as possible." Mr. Hunting, in his excellent little work on horse-shoeing says the nails should be as nearly vertical as possible. Professor Brown, in his pamphlet on the horse's foot and shoeing, on the last page, gives two figures of a section of the foot; one represents the Arab style with the nail-hole in the inner margin of the shoe web, and the nail going obliquely outwards; the other shows the modern style of shoeing, the nail-hole being placed on the outer margin of the shoe, with the nails nearly vertical, inclining slightly *inwards*. Now, gentlemen, since the trial I have examined some scores of old shoes picked up from scrap heaps in blacksmiths' shops, and have also made sections of the feet with the shoes on, some of which are before me now, and for each single nail in a vertical direction, I found 99 inclining *inwards*, but none inclining *outwards*. These photographs and specimens will testify to this. If any of you will take the trouble when in a shoeing forge to pick up a shoe and insert a nail, you will find it to incline inwards; it must do so, otherwise no hold would be got of the crust. Now I would like your opinion on this point. My second object in bringing this before you is this, as the case went against the shoeing smith who was mulcted in heavy damages, I would suggest that veterinary surgeons owning shoeing shops, and shoeing smiths should form a mutual defence association, as they know not the moment they may be proceeded against, even when they have exercised due care in carrying out the work entrusted to them. This leads me to the castrating case lately tried in this town, Penrith, in which a veterinary surgeon and a member of our Society was sued for damages on account of the descent of a colt's bowels after castration, but fortunately without success. It is somewhat analagous to the shoeing case. We may take every pains and care in doing our work, yet, unfortunately, have an accident and be subsequently placed with an unpleasant and costly litigation. These two cases, in my opinion, ought to be quite sufficient to induce members of the profession to amalgamate for mutual defence, and I would advise all practitioners, especially the younger men, to join the Manchester Mutual Defence Society so that they may have every assistance in time of need.

Professor WILLIAMS said, with regard to the nail-holes, the nails should go in straight, but on account of the point being bevelled, it turned outwards and made a semi-circle.

Mr. CARTER said he had been possessor of a shoeing-forge at one time, and he agreed with Mr. Thompson. The nail went in an oblique manner inwards, following the line of the foot. Some nails would have a tendency to go outwards direct,

Mr. LINDSAY mentioned cases in which veterinary surgeons had been blamed for causing the death of valuable animals, and he agreed that steps should be taken to join a mutual defence society. If the veterinary surgeon got hurt, would clients compensate them for their injuries?

Professor WILLIAMS mentioned a case in which a race horse, in course of castration, fractured the femur, and it was found that the horse was suffering from osteo porosis. That was a disease which they did not know all about yet.

The PRESIDENT thanked Mr. Thompson for his communications. It was

absurd to say that the nail-hole should be made in the inner side web of the shoe. He failed to see how veterinary surgeons should be liable in accidental losses of animals. He asked Professor Williams if he suggested that there was a continuation of osteo porosis from the prick in the foot (which the Professor had mentioned) to the various bones in the leg of the horse?

Professor WILLIAMS said that was his impression

The PRESIDENT said he could call to mind two cases which had bearing upon this. One was the case of a horse which, when being castrated, made a sudden plunge and snapped his thigh. It was found that the whole of his pelvis was soft. Another case was a steeple-chaser named Tally-ho, which bumped his leg badly, and later on he appeared to have a bad attack of inflammation of the bowels, and died suddenly. *Post-mortem* examination showed that he had four or five ribs quite softened, and also both femurs softened. To what extent accidents of this kind could be sympathetic it would be interesting to know.

The letter was read from Professor Macqueen regarding the union of societies, in regard to the forwarding of representatives to the National Professional Society.

It was agreed that the President, the Secretary, and the Treasurer should be a committee to confer with other societies and report as to the best plan.

A letter was also read from the Lincolnshire Association with regard to grunting in horses, and its relation to sonndness. The letter was laid upon the table.

A vote of thanks to the chair concluded the meeting.

The annual dinner was afterwards held, being provided by an old friend, Mr. F. Armstrong, M.R.C.V.S., mine host of the "George," and his charming wife. The tables were beautifully decorated. An enjoyable evening was spent in toast and song.

LINCOLNSHIRE VETERINARY MEDICAL ASSOCIATION.

THE fourteenth annual meeting of this Association was held at the George Hotel, Grantham, on Thursday, February 28th, the president, T. A. Rudkin, Esq., Grantham, in the chair. There were also present Mr. J. Clarkson, president of the Yorkshire V.M.A.; Captain Russell, J.P., hon. treasurer; Mr. E. C. Russell, Grantham; W. H. Brooks, Leadenham; J. Mackinder and J. W. Gresswell, Peterboro'; Chas. Hartley, Lincoln; F. L. Gooch, president of the Midland Counties V.M.S., Stamford; Hugh Kidd, Melton Mowbray; B. Freer, Uppingham; and J. A. Robson, hon. secretary, Market Deeping.

The minutes of the last meeting having been taken as read, the SECRETARY read letters of apology for non-attendance from Dr. Fleming, Professors Pritchard, Macqueen, and McFadyean, and Messrs. J. A. Clarke, F. B. Eve, Captain Hayes, James Smith, T. E. Smith, and F. Somers.

Grunting.

The SECRETARY said he had received communications *re* grunting from the Yorkshire, Lancashire, Central, and Midland Societies. The Yorkshire and Lancashire were in accord with them on the question, but the Central, by twenty-two votes to three, took the opposite view. The Midland Counties, owing to want of time, had adjourned the subject to their next meeting. He thought that in the discussions on the question at the Central Society, Professor Macqueen had rather got off the track in devoting so much attention to the circular which he had sent to the different societies, instead of confining himself to the resolution of that Association. However, he supposed the

principle of "a weak case, abuse your opponent's attorney" applied to veterinary discussions, and had been adopted in this instance.

A letter was read from the Secretary of the Eastern Counties Society, stating that the National Veterinary Society proposed to visit Yarmouth in the summer, and asked whether the Lincolnshire Society would be willing to assist in entertaining them. After discussion it was decided that the Treasurer (Captain Russell) and Mr. Gooch should be asked to consider the subject and confer upon it with the Eastern Counties Society. It was generally felt that the state of the funds did not warrant a grant from the Society towards it.

The question of subscribing to the Walley Memorial Fund was considered, and it was decided to leave the matter to the discretion of individual members.

Election of Officers.

Captain RUSSELL proposed the election of Mr. H. Howse, of Lincoln, as president for the ensuing year, as he was sure that Mr. Howse was a gentleman with many qualifications for the post, and that he would fill the chair in an exemplary manner. This was seconded by Mr. BROOKS and adopted unanimously, and the Secretary was directed to write to Mr. Howse, informing him of his election.

The retiring President, Mr. T. A. Rudkin, with Mr. J. Mackinder and Mr. F. H. Reeks, were elected vice-presidents.

The Treasurer, Captain Russell, and Hon. Secretary, Mr. J. A. Robinson, were re-elected.

The TREASURER read a statement of accounts for the past year, showing a balance in hand of £16, and there was a sum of £11 owing to the Society for overdue subscriptions, most of which he hoped to get in. The accounts were passed, with a very hearty vote of thanks to Captain Russell for the time and energy he had devoted to the affairs of the Society.

Mr. HARTLEY proposed that Mr. Tom B. Bindloss, of Long Sutton, be elected a member of the Society. This was seconded by the PRESIDENT, and carried. Captain RUSSELL proposed the election of his son, Mr. E. C. Russell, of Grantham; seconded by Mr. BROOKS, and adopted.

Mr. HARTLEY then read the circular letter which he had received from Professor Macqueen in reference to amalgamation of the various existing societies with the National Society. Mr. Hartley supported the propositions contained in Professor Macqueen's letter, but owing to want of time to fully discuss the subject at that meeting it was resolved that the officers of the Society form a committee to consider the matter and report to the next meeting.

Mr. B. FREER, M.R.C.V.S., Uppingham, read the following paper on—

"SOME NON-CONTAGIOUS SKIN-DISEASES OF THE HORSE."

Mr. President and Gentlemen,—Towards the end of the year 1895 our worthy Secretary paid me a short visit, and so pleased was I with his company that in a moment of rashness I promised to read a paper at the next meeting of the L.V.M.A. Whilst looking around for a subject it occurred to me that a few remarks on some non-contagious skin diseases of the horse might bring about what every essayist anxiously looks forward to—a good and profitable discussion.

The first and by far the most important of this class of skin diseases to which I shall draw your attention is that known as eczema. Professors Robertson and Williams both speak of four distinct varieties, eczema simplex, eczema rubrum, eczema impetiginodes, and chronic or squamous eczema. As our clients don't care a toss whether it is squamous or impetiginodes, so

long as we can cure the animal in double quick time, it will be sufficient for our purpose to-day to speak of eczema as acute and chronic.

The word eczema is derived from the Greek, and means an outbreak or eruption. The disease is a true type of cutaneous catarrh. It may occur in any part of the body, but in our patients is usually seen on the neck, shoulders, and quarters. If detected at its commencement, vesiculation may be noticed, followed by the discharge of a thin watery fluid. If not checked this runs on to pus formation, and the shedding of epidermis. The irritation and itching are intense. Some animals, if not properly secured, will not only rub themselves raw, but actually tear out pieces of skin with their teeth. We read that this disease may be confounded with mange, but although the symptoms are much allied, and eczema occasionally assumes an enzootic form, the two may be readily differentiated.

One characteristic peculiarity of eczema is its strong tendency to recurrence, hence to use a common expression, "it is as well not to holloa until you are out of the wood," or talk too much about any specific treatment, for you may possibly leave a patient apparently cured and a few days later find him or her as bad or worse than ever.

The causes are chiefly intrinsic, and probably depend on a disturbed condition of the digestive and urinary systems. Curiously enough it is seen under exactly reverse conditions—in animals that are stabled, and fed on dry food, as well as in others when turned out to grass. I have long held the opinion that it is allied to rheumatism, and is due to depraved digestion, and the formation of a poison which should be, but is not, eliminated by the kidneys.

I will now, with your permission, allude to two cases occurring under entirely different conditions, and each proving equally obstinate and difficult to cure. No. 1 was a grey mare, five years old, the property of a clergyman, and being the only offspring of an old favourite had been pampered from birth. When turned out to grass at three years old she rubbed all the hair off her mane and tail; this they treated by washing with soft soap and warm water, and afterwards dressing with paraffin, and then sent her to be broken. On her return she was broken indeed, and the eruption cured for the time, and it took the rest of the year to bring her back to anything like her old form. On the approach of winter she was at once housed, and developed no more eczema that season, but within a week or two of being grassed the following spring it returned with increased severity. She was turned out in a park-like field, and before they fetched her in had not only denuded herself of mane, hair off the tail, and a considerable quantity of skin, but had rubbed the bark of most of the trees, and the paint off all the iron hurdles. She was then sent to me for treatment. I used her as a hack for a time, and whilst in pursuit of my vocation came one day in contact with a gentleman who, without being a member of the profession, combined the callings of castrator setoner, hoof cutter, and general practitioner. He saw the mare, and immediately diagnosed the case as one of mange; he thereupon offered to give me a receipt, which he would not divulge to any other person in the world, that would cure her in 24 hours, or he would eat her, mange and remedy included. We walked together a short distance, and in tones that were meant to penetrate he gave me the following recipe. Get a double handful of bear's foot (the botanical name for this is helleborus niger), and boil in a gallon of stale chamberley. This word puzzled me for a second or two, but having grasped its signification, I asked should it be male or female. He replied that does not matter, but it must be stale, and should be collected in the morning. Rub this decoction well into the skin with a dandy brush and cure is complete. This man has long since joined the majority, and I now hand over the secret to the profession in general and the L.V.M.A. in particular. Needless to say

I did not try it, but the eczema ultimately yielded to treatment, which I will describe later.

Another case, quite opposite in character, was that of a harness mare, the property of a nobleman. She commenced rubbing towards the end of the London season, and mange being suspected was at once sent off to the country, and I was asked to attend. By the time I saw her she had rubbed the hair off the top of her neck, shoulders, withers, and quarters, and apparently a good deal of the skin as well, This turned out to be an exceedingly obstinate case, and was not thoroughly cured until the end of the following October. To make certain that it was not mange, I on more than one occasion, assisted by a medical friend, examined portions of the skin microscopically, with negative result. I then put an old pony of little value in the same box with her and she used him as a rubbing post, but did not hurt him.

The treatmeut of this troublesome disease as given in text-books, combined with other remedies that occurred, or were suggested to me, was in this case thoroughly carried out. I will therefore detail it to you, at the same time emphasising those remedies which appeared to me to have the most effect. Feeling quite sure at first that this was a case of acute eczema, I administered a dose of physic, and gave orders that as soon as it had ceased to act the diet should be changed in every possible way, preference to be given to green food. The physic was followed by powder containing—

Potas bicarb.	2 drs.
Pot. nit.	2 drs.
Nux. vomica.	½ dr.

Ordered the skin to be gently but thoroughly washed with soda and warm soft water, and sent a supply of the following lotion: liquor picis alcoholicus one part, soft water eight parts, to be applied twice daily. This is an excellent remedy in acute eczema, At the end of a week a note came stating that the mare was certainly better, but still rubbed. I may here incidentally mention that every possible means was employed to prevent her from damaging her skin, for if left to her own sweet will she would have eaten herself.

On my next visit found her generally improved ; the skin looked better, there was less moisture, but the tendency to rub was still evident. Medicine and lotion to be continued for a week.

The next report was that she seemed much better, but to my intense disgust on calling again found evidence of another crop of vesicles on the neck and withers. The itching as bad as ever. Medicine changed to acid nitro-hydrochlor dil., two drs. twice daily in the drinking water. The skin is to be carefully washed with mercurial soap, and a lotion afterwards daily applied, liq. plumbi, glycerine, and soft water. To cut the matter short, it was a game of battledore and shuttlecock week after week. Gave small doses of aloes with sodii. bicarb. and gentian, followed by liq. arsenicalis. Dressed the skin according to its condition with everything that occurred to me, and at last was taken ill myself. Sir Henry Simpson saw her at this time, and very kindly wrote to me with reference to the case. He strongly recommended the application of the old-fashioned remedy oil of tar, sulphur, and train oil. As soon as possible sent a supply with full instructions, and on my next visit must candidly admit that her condition generally had much improved ; whether it was the liniment or the fact that she had gone short of medicine, etc., in consequence of my absence I don't know, but think the liniment did much good.

Three weeks passed away and considerable improvement was noticed, but she still rubbed at times. Seeing that everyone was sick of the case, not forgetting myself, I asked that she might be sent to my place for a month, and, as her fore legs showed signs of wear, proposed to blister them. This was

agreed to. The mare arrived, and on the following morning I thoroughly washed her myself from head to foot with mercurial soap and warm soft water. Blistered her fore legs the following day, with excellent effect; and from that day to the present she has never rubbed. About 5 ounces of unguentum cantharides 1 to 6 was used; this produced some amount of diuresis, and I firmly believe that whatever poison was left in the mare's system was eliminated by the action of that blister.

Case No. 1 was practically cured by hard work, change of diet, suitable medicine, and frequently washing the skin with mercurial soap, an excellent remedy in most cases of chronic eczema, and strongly recommended to me by that sterling old practitioner, the late Mr. Stanley, of Leamington.

Internal treatment may be summed up by saying that the object of medicinal interference should be to correct any abnormal conditions present in the organs or secretions. In acute eczema entire change of diet and water, physic followed by alkalies and vegetable tonics. Wash the skin with an alkaline solution, and apply remedies already mentioned. If there is much weeping, a powder consisting of starch, acid boric, and zinc oxide may be dusted on with benefit. In the chronic stage liq. arsenicalis, or liquor arsenici bromidi, and acid nit. hydro-chlor. dil., are useful, and may be alternated; and as external applications I should pin my faith to mercurial soap and a liniment or ointment containing sulphur and oil of tar; the bases being fish or animal oil, or lanoline. Should the case remain obstinate, I should certainly try, instead of blistering, small doses of cantharides internally, say 5 to 10 grains daily, with vegetable tonics. The medicine to be promptly stopped should kidney irritation be noticed. Sulphite of calcium was strongly recommended to me by an eminent Midland practitioner, but I cannot say that any marked benefit followed its use. Professor Williams read an interesting paper before the Lancs. V.M.A. on urinous eczema. Unfortunately I have not noticed this condition. The symptoms were constant discharge of ammonical smelling fluid through the skin, swelling of the limbs, with excoriations at their flexures.

These symptoms were relieved, and in one case cured, by the frequent administration of purgatives. The local treatment was palliative, such as emulsion of oil and potash followed by dry dressing of carbolized chalk or other absorbents. I should think when an animal starts urinating through the skin his chance of cure is extremely remote.

Urticaria.

Urticaria, commonly known as nettlerash or surfeit.

Professor Simmonds when lecturing on skin diseases used to tell a little tale. He and Professor Morton were rambling in the Isle of Wight when they discovered some tempting mushrooms some of which they gathered and ate. Shortly after Professor Morton developed symptoms of nettlerash, they made at once for a farm-house and procured some milk of which they both drank freely. This acted as an antidote, quickly stopping the rash in the one, and preventing it in the other. The Professor used to say that where milk could not be had, a good dose of whisky would have the desired effect. Shortly after I visited some friends in the South of London and there had a great treat—mussels for supper. Soon after the repast I retired, but awoke somewhere towards morning with the idea that I had either contracted scabies or was the victim of an attack from the little insect know as Pulex Irritans. I struck a light and found that from head to foot I was covered with a rash, at once diagnosed as urticaria. No one was stirring, so had to pass the next two hours as best I could. About 7 a.m. went down and procured some whisky, and thinking that two antidotes were better than none, diluted it with milk; soon afterwards walked to College, a distance of four miles, and on my arrival the rash had disappeared. Fortunately it was Saturday, so to com-

plete the cure, took at night two pills. As mussels had caused the disturbance, I, on the *similia similibus curantur* principle, selected "Cockles."

Our patients do not, as a rule, eat shell fish, neither do they show any particular liking for mushrooms. We must, therefore, look elsewhere for the cause. I think it may be generally traced to a deranged condition of the digestive system, with probably some ferment or poison circulating in the blood.

A most interesting case of urticaria occurred in my practice some two years ago. Subject—a five year-old hunter, recently imported from Ireland. Had received a bran mash over night preparatory to a dose of physic next morning, was found, to use the groom's expression, "smothered from head to tail with lumps." As soon as possible they sent for me. The symptoms noticed by me were those of urticaria generally, but in a marked degree. Not only was the horse covered with circumscribed swellings, but the lips, eyes, and nostrils participated; so much were the latter swollen that in breathing he made a pronounced purring noise. The pulse was about 50, temperature 102. My first care was to administer a strong diffusible stimulant:

Spts. æth. nit.	oz. ij.
Æther meth.	oz. ij.
Liq. ammon. acet. dil.	oz. iv. in water.

And 5 drms. in ball.

Advised that a linen or calico sheet be placed next the skin and the ordinary rugs over all. Left a supply of the above medicine, minus the ether, to be given at intervals, and paid another visit the following morning. The physic was acting freely, the face had resumed its normal appearance, the greater part of the swelling had disappeared, but there remained one on each side of the shoulder—just where those troublesome tumours come in cart-horses from the pressure of the collar—about the size of an ordinary saucer, hot, and extremely painful to the touch. A lotion containing liq. plumbi, tinct. opii. and water was ordered, and the medicine continued until the following day, when the swelling on the near shoulder had almost disappeared, but the one on the off side had doubled in size, was hard, but less painful. This puzzled me. As something had to be done, I ordered frequent warm fomentations; the lotion to be continued, and sent powders containing

Potas. bicarb.	2 drs.
Potas. nit. and gentian..	2 drs.

The tumour remained *in statu quo* for several days. At last determined to blister it; in three weeks it was reduced one half; a second application, assisted by the internal administration of potas. iodide, completed the cure, and the horse was soon after sold. I hope some of you may be able to enlighten me as to the nature of this enlargement, for up to now I remain in ignorance.

The treatment in this case is in the main applicable to all. Strong diffusible stimulants, a moderate cathartic, followed by salines and vegetable tonics. In an urgent case should bleed. If there is much itching a lotion containing—

Hydrarg. perchlor.	10 grs.
Acid hydrocyanic dil.	4 drs.
Aqua	1 pint.

May be applied with advantage. One or two cases that I have attended have been ushered in by a well marked rigor and diarrhœa. That would not determine me from giving an aloetic purge. I say aloetic, because some might advocate linseed oil, a drug that, in my opinion, so far as the treatment of the horse is concerned, might well be eliminated from the pharmacopœia.

Erythema.

We shall now pass on and briefly consider the disease known as erythema, which really means redness of the skin, or a blush. It may be termed a true dermatitis, characterised by heat, pain, redness, and more or less swelling. Two or three varieties are spoken of, as traumatic, exudative, and erythema intertrigo. the latter usually seen in fat animals that sweat freely and are not properly groomed, in mares in and occasionally out of œstrum, through the urine trickling down the tender skin of the thighs. I take it that all these varieties may be classed as traumatic.

The causes are extrinsic, although we know that some animals are more susceptible to skin irritation than others. Our attention is principally directed to the condition known as cracked heels. Mud fever. sore backs and shoulders, and other parts that come in contact with the harness or saddle.

Unfortunately for us the marvellous winter through which we are now passing has not been provocative of mud fever or cracked heels. Zinc ointment and similar remedies have been at a discount. Back lotion has, however, gone up to a premium. During the decade terminating with the year 1889, and which, with one exception, was noted for wet winters, the treatment of mud fever materially added to our annual returns, and it was during that period that I saw many cases of exudative erythema, accompanied by a considerable degree of fever and constitutional disturbance, and followed by general desquamation and most troublesome fissures, not only in the heels, but up the back of the limbs, notably the hind. It was soon evident that horses whose limbs were clipped and frequently washed suffered by far the most. It therefore became fashionable, and rightly so, to leave the hair on the limbs and do without washing. The latter cannot always apply, for I know districts where the mud is so tenacious that it is absolutely impossible to remove it without soaking and well soaking too. Clipping and washing are undoubted provocatives, but in a well regulated stable should still hold with washing a horse that is plastered with mud, and, of course, thoroughly drying after. In treating erythema local applications are of the first importance, together with the instant removal of the cause. In mild cases, whether it be mud fever, chafed backs, or what not, the parts should first be thoroughly cleansed with warm water, and afterwards carefully dried with a sponge, followed by a soft cloth. A lotion containing liq. plumbi, glycerine, and soft water, or a saturated solution of acid boric, should be applied and the limbs tightly bandaged. In inflamed backs the boric acid lotion is especially useful; the part should either be covered with a soft rubber, or a calico or linen sheet take the place of one rug. A dose of laxative medicine may be given with advantage, and this should be followed by salines with vegetable tonics. This treatment applies also to sore shoulders and necks. The latter condition may invariably be prevented by fixing in the top of the collar a zinc pad. In badly cracked heels one or two poultices of bran and linseed meal or boiled carrots may be necessary; after removal the parts should be thoroughly cleansed, and then smothered with benzoated oxide of zinc ointment, into which has been rubbed or stirred a small quantity of camphor. Where the cracks or fissures are extensive, a weak solution of argent nitras. may be applied, or a lotion containing zinc sulphate, glycerine, and acid carbolic.

In exudative erythema distributed over a large surface, we may, after a thorough cleansing, freely dust the parts with finely powdered zinc carbonate. The common lapis calaminaris is the best. When desquamation commences, I usually apply a liniment containing lig. plumbi 1 part, olive oil 4 parts, or a lotion containing a considerable proportion of glycerine. Should there be much œdema, or the animal be in a weak condition, tonics combined with a mild diuretic should be given. Ferri sulph, resin and gentian given in ball is an excellent remedy, as also is the acid nitro-hydrochlor in the drinking water.

The diet should be fairly liberal, and where green meat is not obtainable, carrots are an excellent substitute.

Such, gentlemen, is my paper. Crude and unpolished it is, but I sincerely trust that you may find in it food for discussion. We are all of us workers, or, at all events, think we are, but few of us care after a hard day's work to study bovine medicine or equine surgery, or treatises on diseases of the skin. Interchange of ideas at such meetings as those do a busy practitioner far more good than groping his way through some ponderous volume. Pull the paper to pieces all you can; tell us all you know, so that when we leave this room to join again at the festive board, we may one and all feel that we have added something more to our store of knowledge.

Discussion.

Captain RUSSELL said he was sorry he did not feel in the position to raise a discussion on the paper which had just been read to them. They had no time or opportunity to do themselves justice in a discussion on such a paper that day. He must say that he never heard a more lucid description of the various diseases than that Mr. Freer had just given. He should like to congratulate Mr. Freer personally on the treatment he had described. He failed to find a single fault with the paper. As to the disease eczema, he approved generally of the train oil and oil of tar treatment, but he was sure they would agree with him that it was seldom two cases required the same treatment. They would find that apparently desperate cases readily improved under treatment, whereas others of a simple character would require particularly drastic measures before a radical cure could be effected. He thought it would be an experiment worth trying, to blister another horse under the conditions mentioned in the paper, and see if that would effect a cure. As to nettle-rash, they, in his part of the country, were not called upon to attend many of those cases. He did not think he had had over six or eight cases in the whole year. They had had an interesting case in a cow. The owner thought the cow was suffering from anthrax, because she was swollen to twice her natural size. They gave a simple purgative, and left a lotion of liq. plumbi, but he thought the purgative was the thing that was actually necessary, and the next day the animal was well. In India they used to have many cases of nettle-rash, as the horses were kept out of doors tied up. As to mud-fever, he had used the sub-acetate of potash with glycerine and oil, and the internal remedies. Cracked heels were almost things of the past. He had not seen a cracked heel for three or four years, except as the result of an injury. He never allowed one of his horses to be washed now, because his horses once had mud fever badly from this cause. They were now just rubbed with a wisp, and put in the stable until the legs were perfectly dry, and then brushed down.

Mr. HARTLEY wished to add his thanks to those of Captain Russell and Mr. Freer for his very practical paper, and for his correct and telling description of the various phases of these troublesome diseases. He himself had used mercurial soap, which he considered very effectual. His soap contained biniodide of mercury, with an excess of the iodine. He also did not believe in hunter's legs being washed. First rub off with a straw wisp and bandage on the top of the dirt, but if they could always ensure proper treatment in drying, and have the water at the right temperature, washing would not have a bad effect. Captain Russell referred to the fact that from limestone roads horses often contracted mud fever, and he knew three separate farms, each having horses with mud fever caused in that way. Mr. Hartley briefly described his treatment of sore backs.

Captain RUSSELL asked if paraffin was used pure or mixed with anything. Had Mr. Freer ever experienced that paraffin rubbed over a horse took all the hair off its body and left it completely bald?

Mr. HARTLEY said he used paraffin and castor oil, one to four.

Mr. GOOCH said on almost every point he agreed with the essayist as regarded the treatment and the length of time. He had used an alcoholic solution of coal tar with excellent effects—oil of tar with a little white hellebore.

Mr. KIDD thanked the essayist for his paper, and said that eczema showed like ringworm, but without the roughened surface, and much larger. In one case he cited, the spots extended over the shoulder and neck, and the surface of the spots was in one case of the size of a crown piece and in the others of half-a-crown. They came up in vesicles, and the epidermis came off and left a bare patch. Erythema looked like mud fever and cracked heels combined. In each of the cases there was an exceedingly foul-smelling discharge. This he attributed to the unhealthy condition of the digestive apparatus and the sluggish condition of the urinary organs.

Mr. CLARKSON said he could thank Mr. Freer for his interesting paper, as it was one to which he had listened with great pleasure. He had a quantity of mud-fever cases, which he first treated with lard and olive oil. He advocated the use of prussic acid with an alkali, and afterwards a corrosive sublimate iotion. Captain Russell had mentioned paraffin. He could only say that a manager of one of the collieries he attended had used paraffin with wonderful effect, especially in the treatment of laminitis. Mr. Hartley asked Mr. Freer if he could tell them anything that would colour tar emulsions and destroy the peculiar smell, as they were apt to be mistaken for the well-known remedies. He had used aniline as a dye and oil of cloves to scent them.

Mr. GRESSWELL thanked the essayist for his paper, and said they had often cases of nettle rash in his district through horses eating a quantity of potatoes and bringing on indigestion.

The PRESIDENT also thanked Mr. Freer for his paper, and agreed that it was not advisable to wash hunters' legs. Cracked heels they were always liable to in horses out of condition, and sore backs they could not help sometimes, and perhaps the worst time was just now, when the hair had done growing.

Mr. FREER, in reply, said he was very much obliged to them for the way in which they had handled his paper. He had simply brought it forward to stimulate discussion, and this end had been attained. He agreed with Captain Russell that it was a very good plan in eczema to vary the treatment entirely. In the case in which he mentioned the use of paraffin, the owner had applied it, he had not, although he had seen some good effects from a weakened solution of paraffin, and he had also seen horses denuded of hair from the injudicious use of that remedy. He believed in leaving the mud on horses in badly-regulated stables until the next morning; but where they had a stable where the horses were thoroughly groomed and dried afterwards, he should advocate washing. No doubt in districts where limestone prevailed it would act as a caustic. He was a great believer, too, in a saturated solution of boracic acid. The case which Mr. Kidd mentioned looked to him like a case of herpes, a non-contagious form of ringworm. He had used corrosive sublimate in eczema in the proportion of ten grains to the pint of water. He was very fond of leaving the hair on under the saddle where horses had a tendency to sore backs.

Mr. ROBINSON proposed a vote of thanks to Mr. Freer for his paper, from which they had all derived a great amount of pleasure and information. When he asked Mr. Freer to give them a paper he knew that from Mr Freer's practical knowledge and well known literary ability, they were sure to get something worth hearing, and they would all agree that he had not been mistaken.

Mr. GOOCH seconded the vote of thanks and it was adopted unanimously, and suitably acknowledged by the essayist.

Mr, MACKINDER proposed, and Capt. RUSSELL seconded a hearty vote of thanks to the retiring president.

Mr. RUDKIN, in reply, said it had been a very great pleasure to him to hold office and he should always be willing to do all he possibly could to further the interests of the Society.

After the meeting the members present dined together, and after the usual loyal and patriotic toasts had been duly honoured, the Council of the R.C.V.S. was proposed in eulogistic terms by Captain RUSSELL, coupled with the name of Mr. Kidd. Mr. KIDD in reply mentioned that he would be a candidate for re-election to the Council in May next, and it was unanimously resolved that the Lincolnshire Society use all its influence to secure the return of Mr. Kidd to the position which he had filled so ably since his first election to the Council. J. A. ROBINSON, *Hon. Sec.*

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

THE 34th annual meeting and dinner of the above Society was held at the Grand Hotel, Manchester, on Friday, the 14th February, 1896. Meeting at 5 and dinner at 6 p.m. Present:—The President, Mr. J. H. Carter, in the chair. There were also about 40 members and guests, including Professor Williams, Drs. Hutton, Kelynack, and Delépine.

It was proposed by Mr. S. LOCKE, seconded by Mr. E. FAULKNER, and carried unanimously that the minutes of the last meeting be taken as read.

Nominations for Membership.

Professor WILLIAMS nominated Captain Hayes, Tarpoley, as a member of the Association.

Mr. W. A. TAYLOR nominated F. W. Hall, M.R.C.V.S., Manchester, as a member of the Association.

Mr. WOLSTENHOLME proposed, Mr. S. LOCKE seconded, and carried unanimously, that Messrs. Faulkner and Jones be appointed auditors for this year.

The PRESIDENT then delivered his inaugural address, published in last month's issue of the VETERINARY JOURNAL.

The members then partook of dinner.

The PRESIDENT proposed the toast of the Queen; Mr. William DACRE (Vice-President) proposed the toast of the Prince and Princess of Wales, and the rest of the Royal Family.

Mr. A. LAWSON, in proposing the toast of the Navy, Army, and Auxiliary Forces, said he thought the navy was still as great as ever; that the army, under General Wolseley, would be much improved; and that the volunteers would be the backbone of the nation.

Mr. MASON, who responded, said he endorsed Mr. Lawson's sentiments.

Mr. WOLSTENHOLME, in proposing the toast of the Medical Profession, said he took very great interest in the intercourse he had with that profession, for it always led to further improvement. He also thought that in Manchester veterinary surgeons were happily placed in having a medical profession with an *alma mater* that is particularly kind and generous. He asked the members to drink to the health of the medical profession, coupled with the names of Drs. Hutton and Kelynack.

Dr. HUTTON, in responding, said it was a great pleasure to Dr. Kelynack and himself to be present at the L. V. M. A.'s festive board. Of course they were there not as individual members of the profession, but as officers of the Pathological Society, which had the honour of numbering some of the L. V. M. A. as members. He was among, if not the first, to suggest how

much the Pathological Society would benefit by the admission of members of the veterinary profession at their meetings, and it was a pleasure to him to remember that the proposal met with approval. He would like a great many more veterinary surgeons to become members, because he found that those who attended their meetings were by no means idle spectators, but were material contributors to the success of the meetings and the advancement of the science which they all had at heart. Looking at the problems facing them now, they could receive much help from the veterinary profession. The most prominent matter which sooner or later would have to be dealt with, was the question of tuberculosis, as it occurs in human subjects, and its relation to tuberculosis in the lower animals. When such expressions of opinion as they heard from the various agricultural societies, that a proportion of cattle varying from 30 to 50 per cent.. according to the district, are the subject of tuberculosis; when they saw in their midst the enormons mortality among infants, where there had been no history of tuberculosis previously, they could not but ask themselves whether it had come from taint from parents of a tubercular nature, or whether the real source must not be sought elsewhere? The conclusion they had come to from the many cases at the Children's Hospital, was that special attention should be given to the meat supply, and very much more largely to the milk supply. In this the medical profession must shake hands with the veterinary, and so urge the public by educating them to adopt more stringent measures with regard to the meat and milk supplies. He thanked the members for the honour they had conferred upon them by asking them to the dinner.

Dr. KELYNACK said: Mr. President, Mr. Wolstenholme, and gentlemen, I remember reading some years ago in an old author that the points of a good horse were 15 in number. I presume that this number has been increased in recent years, but I have forgotten, I am sorry to say, what most of these 15 points were. Six, however, I remember, because in three it was stated that the perfect horse partook of certain properties of man, he was bold, he was proud, and also he was hardy; and in three points he partook of a noble woman, fair-breasted, fair-haired, and easy to move. It seems to me that your Society in many respects complies with these points. Certainly it is a bold Society; for I see that it takes the name of Medical, and that, in my mind, is one of the grandest names with which anyone may be connected. It has also every reason to be a proud Society, because it numbers among its members yourself, Sir, and ex-presidents and members from all parts of the country and from adjacent counties, who have formed the Society, and who have helped the profession not only in this city but in all parts of Yorkshire, Lancashire, and Cheshire. It also seems to me a very hardy Society, for it has I believe almost reached the years of maturity to which I myself have reached. It is unnecessary to attempt to point out the particular attractions of your Society, bnt certainly the members, so far as one can judge by external appearances, are only surpassed by the medical profession. It certainly is a fact that this Society is easy to move, for I believe during past years it has widely increased both in numbers and in influence, and I take it that this easy movement is due to the able hands that have from year to year held the reins of authority. You have associated my name in this toast with that of the medical profession and I feel it is a great privilege to reply to this toast. First as a personal member of this profesion I am proud to be here, secondly as being connected with the Pathological Society I am glad to second the remarks of our president. I am also pleased to sit with our esteemed chief, Dr. Delépine, at this table. I am also pleased to be present as a member of the Owens College staff, the doors of which College, as Mr. Wolstenholme has so well pointed out, are always open for investigators. I am also specially pleased to meet my old and energetic co-worker at this hospitable board. It

seems to me that it is specially through my connection with the Pathological Society that you have been good enough to invite me here; and although Dr. Hutton is always anxious to attract new members and I as treasurer to receive their subscriptions, yet I think I may truthfully say the main, if not sole, point of our Society is to give and get information. This we are willing and anxious to do from all sources. If I might venture upon an opinion as a young man it seems to me that the study of the relationships been man and animals have hitherto been too much in the hands of anatomists and physiologists, and I venture to think that the time has come when we, as pathologists, if we are to advance in a way which will be of mutual advantage, must study many of these processes together. Certainly as far as I can gather, co-operation is essential between the human and animal pathologist. It would be out of place for me to venture to point out, if it were even within the scope of my ability, the way in which veterinary medicine has benefited my medical practice and custom, but I would take this opportunity of gladly acknowledging the debt that we as human pathologists are under to the students of animal pathology, and it seems to me at this time when it is the fashion in certain circles to decry and minimise the influence which animal pathology has had on human pathology, only meet and right, and to avail oneself of the opportunity in expressing our indebtedness to the investigators both medical and veterinary who have by their researches on animal life thrown light on the human subject. If time would permit one might readily refer to the increase in our knowledge of the etiology and processes of such diseases as anthrax, tuberculosis, rabies, actinomycosis, septic diseases, and the like, in which our knowledge as regards man is in very great measures due to investigation on animals. As practical physicians we know the value of these investigations, for we are constantly using measures for the alleviation of suffering, which are the direct outcome of these researches. As striking examples, I have only to refer to the Pasteur treatment for rabies to the use of such agents as immunised serum in diphtheria and for the wonderful results that during the last few years we have reaped from the use of the animal extracts in such diseases, for example, as myxœdema. If I remember rightly it was Oliver Wendell Holmes, a true lover of men and animals, who pointed out that the "best part of knowledge is that which teaches us where knowledge leaves off and ignorance begins," and if we have reached that stage, and I think many, if not all in this room, will have reached such a stage, we can but help seeing before us an immense field needing earnest investigators. I believe the efforts in Manchester and Salford of such gentlemen as our officers of health, Dr. Niven and Dr. Paget, are tending to stamp out many of our preventible diseases, and to limit the spread of these diseases which are our national disgrace, and no doubt the time will speedily come when many of our profession will have plenty of leisure. I also understand the use of the cycle, and according to to-day's paper the rapid introduction of motor carriages will soon give the veterinary profession more spare time. It seems to me, gentlemen, that in the near future this good time is coming for both professions, that we may turn our thoughts to careful investigation, and perhaps co-operate together to clear up some of the dark problems which still await solution. I thank you most heartily for this opportunity of associating my name with such a profession as the medical profession, and in return wish your Society the warmest success, and trust that the two professions in Manchester, and especially in connection with the Pathological Society, with which you have coupled my name, may progress as favourably in the future as they have done in the past. I thank you, gentlemen, most heartily.

Dr. DELEPINE: Mr. President and gentlemen, you could not have done better than to ask a member of the medical profession to sound your praise,

Nobody could appreciate the work done by the veterinary profession better than medical men. The extremely modest view which my friend and colleague, Mr. Wolstenholme, has taken of the relation between the medical and the veterinary professions makes it easier for me, perhaps, to speak with admiration of the work done by you. I can give you as an example of the esteem which we have of your abilities a slight anecdote which concerns no less a man than Prince Bismarck. He had been for some years rather unwell. He lived well, perhaps too well—and had got many of the Court physicians, who, knowing that it does not do very well to impose very strict conditions upon a man of his position, did not care to say exactly what they thought. He called in a younger physician, who began by asking a few ordinary questions of him, and his illustrious patient turned round and said, "I did not ask you to come here to ask me questions, I want you to treat me." He said, "Yes, I think if you were a horse I would not ask you questions, I would have to do without it, but you, being a man, I took advantage of the position, and I ask you a few questions." That shows at once the difference between the two professions. Perhaps you have the advantage of not having to deal with lies. For many years, for several years I think, I have expressed freely the view that the strength of the two professions was in their union. There are a great many problems which begin in the animal—in the lower animal kingdom—and culminate in the human. The spread of many diseases which have been mentioned, and I will not go again into technical difficulties which have been alluded to by Drs. Kelynack and Hutton. Many of the diseases which come to man and the lower animals are communicable not only from animal to animal but from animal to man, and the only way to deal with them is to stamp them out in those animals which are capable of communicating them to man, and the great thing in many instances is of course to recognise the presence of those diseases and their prevalence among the lower animals. For a long time the medical profession have been vain enough to say that they could organise diseases in the lower animals without the help of their colleagues, that is to say, they thought their knowledge of human pathology was enough to organise diseases in the lower animals. Lately, at a meeting of the British Medical Association in London, a medical man was venturesome enough to say that a short training would allow medical men to inspect carcases and to give reports quite as good, if not better, than veterinary surgeons. Now it was not necessary for any veterinary surgeon to go there and say that was a mistake. There is a certain amount of knowledge which is better attained by the studies which you have to prosecute than by the kind of studies which we have to undergo, and therefore we have here at once an acknowledgment both by the medical profession and the public at large of the necessity of our combination. The great work which has been done by a large number of veterinary surgeons especially in connection with diseases already mentioned, viz.:—Tuberculosis, anthrax, myxœdema, glanders, and certain septic diseases, show that we have derived a lot of our knowledge of infectious diseases from work which has been done at least in a great part by veterinary men. It is a thing which we acknowledge in all our medical text books, and which none of the higher scientists will deny, and therefore I think I may say I have power to propose the toast of your profession, and to associate with it the names of Messrs. Faulkner, Locke, and Lawson.

Mr. E. FAULKNER, in responding to the toast of "The Veterinary Profession," proposed by Dr. Delépine, said: Mr. President, Vice-presidents, Dr. Delépine, and gentlemen, I thank you very much indeed for having asked my colleagues and myself, as members of the Council of the Royal College of Veterinary Surgeons, to respond to this toast of "The Veterinary Profession," which has been submitted in such very generous and sympathetic terms and

manner by Dr. Delépine, and I think, gentlemen, we not only appreciate the manner in which the toast has been submitted, but we have every right to do so for the simple reason that there is no gentleman in the medical profession in this district who knows more of the veterinary profession than does Dr. Delépine. Not only is he acquainted with the veterinary profession in this country, but I believe I am justified in saying that he has an intimate knowledge of what the veterinary profession is on the Continent, and as the outcome of that knowledge has submitted for your acceptance the toast of "The Veterinary Profession" in a way that appeals, I am sure, to the feelings and heartfelt sympathy of every member of the veterinary profession gathered here this evening. Not only is Dr. Delépine acquainted, as I have already said, with our profession here and on the Continent, but he is one we look up to in this district because he is fully cognisant of the way in which the two professions overlap one another and dovetail into each other in certain directions, and he can readily notice from his experience the necessity for co-operation in the work that has to be done by the pathologist, be he human or veterinary, and, gentlemen, I think I am justified when responding to this toast in endeavouring to put our calling on high ground, somewhat on the lines taken by Mr. Wolstenholme. We do not look upon our profession as a trade. We do not look upon it in the light as to how much money we can amass in a given time. Rather would I be inclined to follow the lines taken by Dr. Kolynack, Mr. Wolstenholme, and also by Dr. Hutton, that we follow our profession, I think in a very great majority of instances, in consequence of our natural love of animals. I believe if our profession was polled we should find that the great majority of us who have undertaken to follow his particular calling have done so from our natural love of the lower animals, and following on from that it comes in the natural order of things that if we have a love for the lower animals we are also disposed to do our utmost to alleviate their sufferings, to make their conditions of life as comfortable as possible, and to do our utmost to prevent the diseases they are subject to. It may not be, perhaps, at this moment advisable from a pecuniary point of view, but I believe that we get the benefit in the knowledge that we have endeavoured to do our duty by those that are unable to help themselves, and following on still further, gentlemen, the love of animals—our endeavour to make their lives more comfortable—we come to that which is necessary to the end in view, viz., the progress of our profession. I take it we one and all of us, in pursuing our professional career, are ambitious for the progress of our profession. It is part and parcel of our everyday life. We may not make a lot of money, but we have the pleasure and satisfaction of knowing that we in our day and generation have done our best in that particular sphere in which we are placed, and in that particular sphere of professional progress we naturally look to the representative governing body of our profession, viz., to the Royal College of Veterinary Surgeons, its Council and its President, and I particularly regret that this evening we are not honoured by the presence of the President of the Royal College. I feel sure that you would all have been particularly pleased to meet him, because he is one (although we may say representative of the provincial general practitioner) who does his duty in the position in which he is placed at the present time. He spares no effort, and I think there never was a president of the Royal College within my own experience under whose guidance it was a greater pleasure to sit and to show you that his heart is with us in all that pertains to the welfare of the profession. Not only does he do his duty to the Council, but he endeavours to keep the societies in touch with what is going on. He intimated to-day by his letter to the President of this Association that he had had an interview with the President of the Board of Agriculture, and I feel quite sure that he has done the best he could under the circumstances, and made every effort to benefit

the profession as the result of that interview. With regard to the Council of the Royal College and its several committees, no doubt a good deal of interest is taken in their proceedings. This has become very evident of late, and is no doubt perfectly well known to all of you. We have seen various criticisms levelled at the different committees, and also at the Council. We have seen the veteran, Professor Williams, on the war path. The respected Editor of THE VETERINARY JOURNAL has undoubtedly gone over the work of a certain portion of the examination committee of the Royal College of Veterinary Surgeons, and I think it will not be denied that he has hit out straight from the shoulder and above the belt. There is nothing, I take it, in the manner in which he has criticised the action of that particular Committee, or that portion of the Committee, but what indicates an earnest desire on his part to put what he found to be wrong, right. We have had the Editor of the *Veterinarian*, Professor Dewar, dealing with the Registration Committee, and the Editor of the *Veterinary Record* attacking the Council as a whole, of which he himself forms no inconsiderable part. Well, gentlemen, I take no exception whatever to criticism so long as it is wholesome and of a healthy character. I think it tends to good, and shows the interest that is taken in our profession by the several gentlemen who take up the position of critics, and as long as criticism is healthy and wholesome, and makes for professional progress and advancement, we have no right to complain, although as members of Council, we always endeavour to do our duty so far as we are able to, and I think this Society may be congratulated upon the fact that its nominees, three somewhat young members of the profession, were placed on the Council of the Royal College at the first time of asking, and, further, that this Society is to be congratulated that they are pretty well in touch with all that goes on at the Council Board, for Mr. Alec Lawson is on the Finance Committee, Mr. S. Locke on the Examination Committee, and myself on the Registration Committee. Those are the three most important committees, and we are consequently well in touch with what is going on, and fully impressed with a conscientious desire to do our duty. Before I close my remarks I wish, with your permission, Mr. President, to refer to the National Benevolent and Mutual Defence Society. You are well aware, many of you, perhaps all of you, that the headquarters of this Society are located in Manchester. You also know that those who have recently been taken from us devoted the best part of their lives to the furtherance of its objects. Their positions were purely honorary. They had no self interest to serve. Their labour was one of love for the profession and gentlemen they have left behind them to succeed and follow in their footsteps. Some of us are as anxious to do our best by this Society as they were during their day, and, Mr. President, I say in order that it may be thoroughly well understood, this Society is a national one. It is not for the few but for the many. We wish to see not a minimum of our profession members, but the grand majority, if not all. I desire, in mentioning the subject, to say to those who are not already aware of it, it is most advisable for them to come in and join at once, not only to assist in endeavouring to carry on the good work, but by joining the Society they are doing that which is the very best possible thing for themselves. It has a twofold object, benevolence and defence; and particularly in connection with the young members of the profession, I may say as no one knows, no veterinary surgeon knows the day he may meet with a client who is of a litigious disposition, who may harass and worry him, and if he has such a Society as this to go to, where he can not only have sympathy but professional and pecuniary assistance, it is a very good help in such a time of trouble, and we who are officers, know that over and over again members have said, in times when they have been threatened with an action, "What a godsend the Defence Society has been." It lifted a load from their minds, and enabled them to meet trial with confidence and a bold front.

With regard to the Benevolent Society, well, perhaps those who do not belong to this Society may say, "Well, we are not fit subjects for benevolence, we do not require it"; but if they do not require it themselves, they may be the means of affording it to others, and I am very pleased to announce that in connection with this department of the Society, there is a possibility of enlarging its sphere of action. We propose to meet and endeavour to put the Society on such lines that it may assist deserving cases amongst those who are not members, in the time of their trouble and distress, and we thus can do some good, gentlemen, in our day and generation, by furthering the well-being of such a Society as this. I conceive it is our duty to urge all those who are not already members, to come in and assist in carrying on the good work, to protect themselves and endeavour to do some good to others. Gentlemen, I thank you for the kind reception you gave to this toast and the patient hearing afforded me.

Mr. LOCKE said he was exceedingly pleased to respond to the toast of the veterinary profession, and to hear from Dr. Delépine that the medical profession offers the right-hand of fellowship to the veterinary profession. He was sure they appreciated to the full their kindly feeling, and had no doubt that the union of the professions would be advantageous to both. As a member of council, R. C. V. S., he endeavoured to do his duty, and he hoped the members would be thoroughly satisfied with the services rendered. As to the National Benevolent and Mutual Defence Society alluded to by Mr. E. Faulkner, he thought all the members should be members of that Association.

Mr. ALEC. LAWSON also responded to the toast of the veterinary profession.

Professor WILLIAMS, in responding, said it was a great pleasure to him to be present once more amongst them and to see so many of his old students at the entertainment. He was particularly pleased to see one in the chair of their Society, and after a quarter of a century he was proud to think that he still possessed the friendship of the President and his revered father. He felt extremely flattered the members had in Manchester gentlemen with large minds and liberal and enlightened ideas such as Drs. Hutton, Kalynack, and Delépine, who had extended the hand of friendship to the veterinary profession, and called upon them to co-operate with them in order to throw light not only upon the diseases of the lower animals, but of man. Did the medical societies in small towns possess such friendliness, the veterinary profession would stand in a better position. He confessed, and he did so from a question which had been put to him, that in many parts of the country the veterinary surgeon was looked down upon, and often objected to, by the medical man as occupying an inferior station. If they had more gentlemen like Dr. Delepine and others, such a thing would not be, therefore he thanked them on behalf of himself and his professional brethren throughout the country for their kindly sympathy. He thanked them very much for the kind manner in which they had coupled his name with the toast.

Professor WILLIAMS, in proposing the toast of the President, said Mr. Carter was a gentleman well worthy of the position as President, and of his respect and esteem as an old student. He was sure he had made his mark in Burnley, and he was respected and honoured by all his clients. He had very great pleasure in calling upon the members to drink to the long life and prosperity of their President.

The PRESIDENT acknowledged, in grateful terms, his indebtedness to Professor Williams for his very kind remarks.

Mr. W. A. TAYLOR, in proposing the toast of the visitors, said: Mr. President and Gentlemen, it is with unfeigned pleasure that I rise to propose the toast of the visitors and it is a subject of self-congratulation that that toast is entirely free and separate from subjects of a controversial nature. Selfish, indeed, should we be if we assembled at the festive board without tendering

our hospitality to those friends who have deigned to honour us by their presence this evening. Lancashire, it is said, is the pioneer of politics in our land—next to that I would claim for it its sense of hospitality and as a very humble portion of the Lancashire community (the veterinary profession), will not in its feelings of hospitality come second to that if any other communion which gathers at the festive board and has the pleasure and honour of welcoming guests. It is, as I said before, with great pleasure the Lancashire Society of Veterinary Surgeons which, I believe, is the oldest provincial Association of its kind in our land, gathers together once more to celebrate another turn in the wheel of time. There are some that have been alluded to to-night who are absent. Though we regret their absence let the lives they lived shine before us as examples for us in our future lives. Let us be stimulated by the work that they did for the benefit and the progress of a profession which ranks second only to that of the relief of the diseases and the sufferings of mankind. Gentlemen, I feel proud to have my name mentioned by Professor Williams as being, perhaps, if not one of the oldest members of this Association, one who even in his boyhood took a pride in being at the side of his father in the advancement of a noble calling and gladly do I extend the right hand of fellowship to Drs. Delépine, Hutton, and Kelynack. In the good words and the good feeling they have expressed towards a struggling and a poor profession, they may rely upon it that when our studies permit of it we shall be at their side in the advancement of science and the progress of knowledge in alleviating the sufferings of humanity and of the lower animals .I rejoice to see the names of Dr. Fairclough and Mr. Fred Gibson associated with this toast. I am glad Dr. Fairclough is here to-night to do duty to the toast I have proposed ; I feel certain he will do justice to the work placed upon his shoulders. I am only sorry that in addition to him we have not some member of the City Council of Manchester, but I ask you that by all the honours that this Society is capable of, to drink to the health of the visitors, and long may the Lancashire Veterinary Medical Association be in a position to receive visitors and accord them a truly Lancashire welcome.

Dr. Fairclough and Mr. Fred Gibson responded.

Mr. E. H. Stent proposed the toast of the ladies, which was responded to by Mr. Wolstenholme.

CONTAGIOUS DISEASES ANIMALS ACT, 1894.

Summary of Returns of Outbreaks, for the four weeks ending March 14th, 1896.

England and Wales.

Pleuro-Pneumonia.	Swine Fever.	Anthrax.	Glanders including Farcy.	Rabies.	Foot-and-Mouth Disease.
None	Outbreaks confirmed 465 *Slaughtered.* As diseased, or having been exposed to infection 5095	Outbreaks reported 56 Animals attacked 54	Outbreaks reported 56 Animals attacked 82	Cases in dogs reported 74 Other animals ... 4 Dogs, etc., destroyed, as having been exposed to infection 40	None

SCOTLAND.

Pleuro-Pneumonia.	Swine Fever.	Anthrax.	Glanders, including Farcy.	Rabies.	Foot and-Mouth Disease.
None	Outbreaks confirmed 17 *Slaughtered.* As diseased, or exposed to infection 524	Outbreaks reported 15 Animals attacked 30	Outbreaks reported 6 Animals attacked 9	No rabies reported	None.

IRELAND.

None	Outbreaks confirmed 111 *Slaughtered.* As diseased, or exposed to infection 710	No anthrax reported	Outbreaks reported 2 Animals attacked 4	Cases in dogs reported 40 Other animals ... 9 Dogs, etc., destroyed as having been exposed to infection 144	None

THE BODYKE OUTRAGE.

Details of a Daring Crime.

Mr. Ernest Brown, who resides at Ballinacurra House, Limerick, has made the following statement regarding the daring outrage committed near Bodyke on Monday afternoon, which has already been briefly reported :—

"I am Colonel O'Callaghan's agent, and had to drive out to Bodyke yesterday and take with me Mr. Winter, V.S., of Limerick, to see seven bullocks that were poisoned with arsenic on the evicted farms at Clonmoher, and which I am farming for Colonel O'Collaghan. We left Bodyke for home (Limerick) at two o'clock without police protection. The police had to go to Scariff to protect the emergency man whom I sent to Scariff to swear information. Just as we came to Ballymacdonnell Wood, about half-way between Broadford and Bodyke, four shots were fired from four separate guns at us from behind a bank, covered with furze. The shots went about a foot over our heads. The driver (Coll), who always drove the late agent, Mr. M'Adam, pulled up the horse at once, and immediately three more shots were fired. One struck the car, just under where I sat, another passed between Mr. Winter and I, and another in front of the driver. The fence the men were firing from behind was thirty yards from the road. I got down, and took my magazine rifle from the seat, with seven cartridges in it, and pointed it at the place they were firing from. Just as I did so a single shot was fired point blank at me, and struck the fence in front of me, sending the earth over me. I immediately fired at the place, and giving my revolver to the driver, ran to the place they were firing from. When I got there two men were just getting into a large thick furze cover, about 60 yards away, and I fired a snap-shot after them. I heard running in the wood at my right-hand side and fired in the direction. I then went back to the road, and the driver and I (Mr. Winter had no arms and stayed with the horse) ran to the end of the wood and went through part of it, but could hear or see nothing. We then went into Broadford, and reported the affair to the police."

THE FAUNA OF CADAVERS.

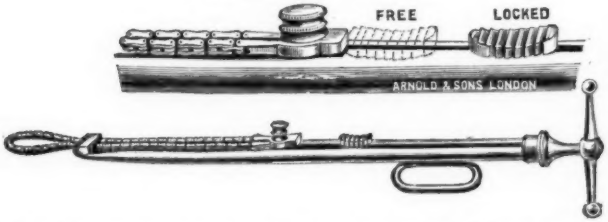
BY MR. P. MEGNIN.

It is a well known fact that myriads of insects take possession of cadavers whose spontaneous generation was accepted long ago. The author has observed that these insects (the *workers of death*) appear successively, and in the same regular order. He has counted eight different *corps d'armee* from the moment of death to the entire destruction of the cadavers.

The recent studies upon putrefaction show that microbes of different species follow each other regularly in the many complex phenomena of putrefaction, and that their action is every time marked by the formation of gases with various odours; these gases, detected by the insects even at long distances by their powerful and delicate olfaction, tell them of the degree to which the putrefaction has arrived, and thus allow them to select the one most convenient for the deposit of their eggs. Thus is explained the regular succession of the insects that Messrs. Megnin and Brouardel have called the workers of death, which are, consequently, the true reactives of the various degrees of putrefaction. These insects, in fact, continue their work even after the work of the microbes is ended; if there remain some small organic fragments, tendon, ligament or skin, which, hard and dry, have resisted putrefaction, they are destroyed by these gnawing insects, which thus come to complete the work of their predecessors.—*Comp. Rend. Soc. Biol.*

NEW ECRASEUR (PATENTED).

BY PROFESSOR J. R. W. DEWAR.



I HAVE just had made for me by the Messrs. Arnold, an Ecraseur, which I am confident will supply a want long felt by the veterinary profession. They have managed to retain the slow steady principle of the screw, while by simply pushing forward the thumb plate, the slack of the chain can be pulled in as easily as in the old Chassaignac's, and by pulling it back again, the screw movement is at once thrown into gear.

The retention of the screw movement does away with the jerky action of the ratchet, so liable to snap the chain, and so undesirable where the arrest of hæmorrhage is essential.

The mechanism by which this is accomplished is inside the shaft, and, therefore, not liable to be disarranged in the course of an operation. The shaft is sufficiently long to make the instrument available for the castration of mares and cows, per vaginum, and is more convenient than a short one for castrating horses in the standing position. The chain is bevelled on one edge, so that it will crush and not cut, a great advantage in castration, while it can be reversed, and the angular edge used when more fibrous tissues require to be divided.

The slot through which the chain passes is also slightly blunted on the edges for the same reason, to prevent the sharp cutting action, which is such a fruitful source of hæmorrhage after the Ecraseur.—J. R. W. DEWAR.

Parliamentary Intelligence.

A DEBATE of considerable importance to agriculturists, and especially to Scottish agriculturists, took place in the House of Commons, on the evening of the 23rd March, on the second reading of what is known as the Diseases of Animals Bill. This is a Bill which proposes to prohibit absolutely the importation into this country of live cattle for feeding purposes. The second reading was carried by a sweeping majority, 244 members voting for and only 95 against it. Mr. Long is therefore to be congratulated on having presented a convincing case to the House. As the law at present stands, it is in the discretion of the Board of Agriculture to order the slaughter at the port of debarkation of all cattle arriving from a country where infectious disease is believed to exist in the herds. In point of fact, this discretion has been exercised with courage by the Board of Agriculture since 1892, and all store importations have been prohibited. The disease which is specially aimed at is the dread scourge of pleuro, which has in the past proved so destructive to the interests of British stock-breeders. The country specially affected is Canada, which, for ten years or so prior to 1892, had succeeded in building up a profitable trade with this country. Scotland has a considerable stake in the business. The Scottish farmers have found that even upon poor pastures in this country the lean kine brought oversea from Canada fatten rapidly, and command a good price in the meat market. With a view to encouraging the trade, special wharves were erected at Glasgow at a cost of £20,000, at Dundee at a cost of £20,000, and at Aberdeen at a cost of £5,000. In 1892 the trade was stopped owing to the complaints of the importation of pleuro. Acting on the advice of experts, the Minister of Agriculture ordered the slaughter of all animals at the port of landing. Of course, this involved loss upon the Canadian exporters, for the animals are necessarily in poor condition after a sea voyage. There have been protests from Canada and from those interested in the trade in this country. The Dominion Government has called expert witnesses to disprove the existence now or at any time of contagious pleuro among the Canadian herds. Those carrying on the trade on this side have declared that the stringency of the Board's action was unjustified, and was really dictated by a desire to help the breeders at the expense of the feeders. But the stock-breeding interests of this country, with the support of agriculturists in general, have maintained that the health of the native herds was endangered, and accordingly the embargo has been consistently maintained. The Bill which passed the second reading in the House of Commons on the 23rd inst., proposes to make the embargo absolute. It is no longer to be left to the discretion of the Board of Agriculture.

It was inevitable that so drastic a measure should arouse strong opposition, for it touches many interests. A large deputation from Dundee, Aberdeen, and the West of Scotland was present at Westminster on March 23rd to influence the votes of their representatives, and no fewer than six members, three from Scotland and three from England, had given notice to move the rejection of the Bill. Mr. Martin White, the member for Forfarshire, to whom fell the task of leading off for the opponents of the measure, recapitulated the stock arguments against it. He scented Protection in the Bill, urged that the price of meat would through it be raised, and that the refrigerated meat trade would reap the benefit. A strong appeal was made on behalf of the Norfolk farmers by Mr. Price, who claimed that this Bill would complete the ruin of these already oppressed agriculturists. Sir George Trevelyan also raised his voice against the Bill. Mr. Long, in a short and business-like speech, stated the case for the Government. While admitting

that the graziers of this country had suffered by the embargo upon store cattle, he pointed out that the Bill would not alter the existing situation. The stock-breeders of this country maintained that they had no security in their business so long as infected animals were being imported, and they were entitled to protection against disease. The Board are satisfied not only that pleuro existed in the Canadian flocks, but also that no amount of inspection at the port of landing could detect all cases of disease. As for the price of meat, it had actually fallen since the embargo was put upon the store cattle trade by the discretion of the Minister of Agriculture; and statistics showed that the trade in foreign dead meat and in live cattle for immediate slaughter was prospering and growing rapidly. He maintained that the only sort of protection involved in the Bill was protection against disease. These arguments did not commend themselves, however, to the opponents of the measure, and a protracted and desultory debate ensued, which occupied the whole sitting. The discussion did not follow strict party lines; but the case for the Government was too strong to be disposed of, and in the end Mr. Long had the satisfaction of carrying the second reading by a majority of 149 in a House of 339 members. The correspondence between the Board of Agriculture and the Colonial Office regarding the Canadian case, which was published on March 23rd, had no doubt its influence in determining the votes of many in favour of the Bill. The division may be taken as reflecting the general sense of the House on the subject. The Government has satisfied itself not only of the existence of pleuro in Canada, but of the impossibility of detecting infected beasts on their arrival, in this country. The talk about this being a measure of protection is plausible, but nothing more; for although it prohibits a trade which has been suspended for over three years, it in no way affects the importation of cheap frozen meat, or of cattle designed for slaughter at the port of debarkation, and everything goes to show that the trade is favouring these latter channels to the distinct advantage of the British consumer. Nor, if the store cattle business were as harmless as it is lucrative, would it be to the interest of this or of any Government to strangle it? To leave the matter at the discretion of the Board of Agriculture has the distinct advantage of allowing of the relaxation of the embargo when suspicion of disease is entirely removed. But, on the other hand, it exposes the Board to continuous pressure from the one side or the other, besides involving those engaged in feeding and breeding cattle in uncertainty and doubt as to the future of their businesses. It is probably these latter considerations that have weighed with the Government in proposing to make absolute and permanent an embargo which up till now has been temporary and discretionary.—*Scotsman.*

Army Veterinary Department.

Her Majesty the Queen has been pleased to bestow an extra pension of £50 per annum, from the Distinguished and Meritorious Service Fund, on Dr. Fleming, C.B., Principal Veterinary Surgeon of the Army, retired.

The following transfers have taken place:—Veterinary-Major G. Durrant, from Newcastle-on-Tyne to Woolwich. Veterinary-Major G. D. Whitfield, from Woolwich to Newcastle-on-Tyne.

The undermentioned Veterinary Officers have arrived at Aldershot for entry, on appointment:—Veterinary-Lieutenants J. T. Coley and W. M. Millar.

Dr. G. Fleming, C.B., retired pay, late Principal Veterinary Surgeon to the Forces, has been granted a "good service" pension of £50 per annum, which became vacant by the death of Staff Veterinary-Surgeon R. J. G. Hurford.

Extracts from Foreign Journals.

THE THERMOMETER IN TUBERCULIN INJECTIONS.

MONSIEUR R. BISSAUGE, of Orleans, writing in the *Recueil de Médecine Vétérinaire* on the best means of economising time and labour in testing cattle by tuberculin, says:—"The instructions for the use of diluted tuberculin, as issued by the Pasteur Institute, run to the effect that the temperature of the animals undergoing the test must be taken before the injection is made, and thereafter every two hours, beginning at the tenth hour after injection, and going on to the twentieth. In case of need the surgeon may content himself with three observations, namely, at the 12th, 15th, and 18th hour, but it is better to take the temperature every two hours. It happens very often in practice, however, that one has to operate on only two or three animals, and the farm is at a great distance, and so one has to choose between making several visits at short intervals, or spending a very long time at the farm for very little work—both plans involving great expense, and often entailing loss to the surgeon. The employment of the fixed thermometer proposed by Mr. A. Trevisan, of Venice, not having yet been adopted [see our next translation], there remains the plan of entrusting the taking of temperatures to the proprietor of the animals himself, but in the majority of cases this is impossible. I have tried it, and in a good many cases have received from small farmers the most absurd information as to figures, given, of course, in perfect good faith, and with the utmost gravity. The following is a plan I have adopted, with success in most cases, and which I recommend: On the morning of the operating day, or the evening before, I give the farmer as many maximum thermometers as there are cows to test, both thermometers and cows being numbered, to prevent mistakes, I take care to bring down the column of mercury myself, and I instruct the farmer to take carefully the morning temperature, or, to be more exact, to place the thermometer in the rectum of the cow bearing the same number, leave it there for a certain specified time, and then replace the instrument in its box. In the evening, just as I am going to inject, I note the morning temperature and take myself the evening temperature; these figures form my basis of computation. I bring down again the column of mercury. After the injection, which I make about five or six p.m., all that the man in charge has to do is to place the proper thermometer in each animal's rectum at the 12th, 15th, and 18th hour without bringing down the mercury; next day these instruments are brought to me and enable me to pronounce judgment, as I have before me in them the maximum temperature obtained. I do not need to trouble myself as to the precise moment when it was obtained." In a note appended to this communication Monsieur Ed. Nocard says:—"Reaction to tuberculin is measured simply by the difference which is found to exist between the temperature of the animal before injection and the highest temperature registered during the twenty-four hours which succeed it. One may therefore, in case of need, act in the manner indicated by M. Bissauge, but, of course, observations taken in this way are not so trustworthy as if taken by the surgeon himself and would have no weight in a court of law. It might be as well to make the farmer take the temperature four times instead of three, because sometimes the reaction is slow and only commences to show itself about the eighteenth hour, so that if no observation is taken after then the surgeon may not have a sure and trustworthy basis for his diagnosis; if the temperature be again taken, say at the twenty-first hour, there is no chance of such an error. The most important point in the whole case, however, is that this

mode of operation is available for *tuberculin test only*. It is *absolutely impossible* for the testing by *mallein*. In the mallein test we have to consider not merely the difference between the initial temperature and the highest temperature recorded after the injection: the *duration* of the high temperature has a real importance. For example a heat curve (*courbe thermique*) starting from 100·3° Fahr., and giving successively 101° at the 12th hour, 104° at the 15th hour, 101·3° at the 18th hour, and 101·2° at the 21st hour, showing a maximum rise of temperature of 3·7°, would have no significance. On the other hand a curve starting at 100·8° Fahr. and showing after injection 102·5°, 103·4°, 103·9°, 103·7°, would indicate a very suspicious case, although its maximum was lower than the other; the *form* of the curve is an element in the diagnosis which we must observe very carefully, and in order to get the proper curve we must register carefully all the temperatures taken after the injection. Besides all this, we must remember how important is the organic reaction, the general condition of the subject, the volume, the duration, and the sensibility of the œdema; how can a surgeon judge of these without having seen them? I repeat, to apply M. Bissauge's proceeding to the mallein-test operation would be to expose ourselves to the most painful mistakes."

A VETERINARY FIXED THERMOMETER.

One of the conditions which prevent the more general adoption of the methods of anticipatory diagnosis of virulent diseases by injections of detective substances is the necessity of taking, at frequent intervals and often for a long period, the temperature of the patient. Monsieur A. Trevisan, veterinary inspector of slaughter-houses at Venice, has constructed an apparatus for retaining the thermometer in its place in the rectum, without hindering defecation and without exposing the instrument to the risk of being broken. According to *Il Moderno Zooiatro* he has made a good number of experiments and has had satisfactory results. His apparatus consists of a sort of clasp (*pince*) which is fixed to the base of the tail and jointed to (*s'articule avec*) the thermometer-holder, which latter is easily brought to the level of the rectum. The apparatus has been tried both on horses and cattle, and has shown itself capable of fairly easy manipulation. The inventor proposes to adapt it for a maximum and minimum thermometer, so that it may be possible to leave the thermometer in its place in the rectum either before or after injection, and allow it, if necessary, to do the work of observation. The difference between the two points would mark the thermic reaction. M. Trevisan deserves the thanks of the profession for his ingenuity, but there are, of course, many serious objections to his plan. He has prepared two models of his apparatus, one for the larger and one for the smaller domestic animals.—A. RAILLIET in the *Recueil Vétérinaire*.

A CASE OF POISONING BY CHLOROFORM.

Dr. Fröhner, of the Berlin Veterinary College, states that in the surgical ward there, from 1st April to 1st October last, 195 serious operations were performed, 91 of which were performed under chloroform. In these a total quantity of 5,325 grammes (= 11·73 lbs. av.) of chloroform was consumed, or an average of 60 gr. (say 2 oz. av.) for each horse, For simple operations 30 to 40 gr. suffice, but for a fistula of the hoof-cartilage, for example, 70 to 80 gr. must be used (a gramme is about 15½ grains). In one case 225 grammes (8 oz. av.) had to be used; for inguinal ruptures 150 grammes (a little over 5 oz. av.), and so on. One case proved fatal. The horse, suffering from fistula of the hoof-cartilage, died after inhalation of 55 grammes (2 oz. av. or 1¾ oz. troy), that is, after a small dose. The narcotising was carried out in the proper way, and the material itself was perfect. The cause of death was

peculiar. The animal was twelve years old, fairly well fed, with weak but regular pulse; he became narcotised very rapidly; within ten minutes, and after 15 gr. had been used, they could begin the operation. At the end of other 30 minutes the breathing became suddenly very hurried, then after a minute stopped; the pulse became imperceptible, the veins swelled out immensely, and all the long-continued attempts to restore animation proved fruitless. On *post-mortem* examination nothing was found to be wrong beyond the congestion as above, except that there was a dilatation of the right heart, with systole of the left ventricle. It was afterwards discovered that the horse had suffered from heat-stroke on 8th July, and had been treated for such till the 20th, whereupon it showed the symptoms of severe brain-disease; from this the animal had recovered, but not sufficiently to allow it to perform any work up to the day when it was sent to the veterinary college. It was manifest that this illness had so weakened the nervous system that a dose of chloroform in itself harmless had produced a fatal result, without the complication of heart-disease or any other internal ailment.—*Berliner Thierärzt. Wochenschr.*

Influence of Abortion on Milk.—Messrs. Schäffer and Hess have proved in the course of their investigations that a previous abortion has as little influence as the retention of the after-birth on the composition of a cow's milk. The investigations were made for the purpose of examining the validity of objections which are often made at official inspections of milk when there is evidence of deterioration in the quality.—*Ibid.*

THE CHLORIDE OF BARIUM TREATMENT AND ITS CONCOMITANT EFFECTS.

Surgeon Thierfelder, writing to the *Berliner Thierärztliche Wochenschrift* reports as follows:—"A six-year old gelding was brought to me suffering from colic and stoppage of the bowels; showed severe intestinal pains; intestinal sounds were almost entirely absent. I gave him an intravenous injection of one gramme chloride of barium in ten of distilled water and he at once began to flap with his upper lip and to switch his tail, and then with much pressing and straining he voided some small hard balls of fæces. He was walked about the yard for a little, and kept on all the time ejecting dung and intestinal gases. After two hours of vigorous exercise he seemed extremely tired and sleepy and was therefore put into a stall. I now observed trembling of the muscles, which gradually extended all over the body and was specially perceptible in the muscles of the legs. The skin, the temperature of which was increased and also unequally distributed, began to show sweat on the flanks, pulse and breathing were markedly accelerated, the pulse throbbing greatly; temperature of rectum about one degree (Fahr.) higher. The lassitude of the patient increased from hour to hour, and at midnight was so serious that he could not be got, either by voice or whip, to stand up on his legs. At this time his whole body was covered with sweat, and from the anus there flowed an almost constant stream of thin, watery fæces. I noted pulse and breathing at frequent intervals, and observed that after midnight there was a gradual return to the normal condition, which was finally reached in the morning, only the temperature remained obstinate, as above; but the appetite returned, and the patient took the bran and hay which I offered him. When, however, my assistant tried to take him out to the yard we found him quite lame. This lameness, which had come on the patient overnight without being noticed, now showed itself as a pronounced case of lameness of the right fore-leg. From the way in which the animal tried to save his foot even when in a state of repose, it was evident that the lameness was accompanied by severe pain, and of this fact clear evidence was given by the look and behaviour of the

patient. On examining the hoof with my hand, I could detect increased heat; when I applied the sounding-hammer, ever so gently, the animal uttered cries indicating the severest pain, more especially when I tapped the sole and the digital part of the wall. I noticed also a stronger pulsation of the hoof artery. These symptoms justified a diagnosis of inflammation of the hoof (pododerm. superfic.). With this lameness there was associated, as a secondary and remarkable condition, a fairly well developed œdema extending from the hoof to the carpus of the fore-leg. The course of this lameness, which was so interesting from the etiological point of view, and which was destined to be affected by no therapeutic agent (such as ice, clay, vinegar) which we could apply, occupied three days, and led gradually, as the inflammatory symptoms disappeared, to a complete recovery. Even the appetite, which had become somewhat enfeebled, returned after the disappearance of the inflammation, and on the fourth day the animal was cured of his colic and his lameness, and was ready for at least a part of his work." Mr. Thierfelder gives a second case as follows:—"A six-year old gelding, suffering from colic and stoppage of the bowels, was treated by me with 10 grammes (6 dwt., 10 gr.), of chloride of barium by the mouth, and showed similar subordinate symptoms to the above; pulse and breathing were quickened, after 24 hours the legs swelled very considerably, and the patient gave one the impression of having stood a very long time in the stable; in his normal state he had never shown any œdematous tendency, so that on this occasion the œdema must be attributed to the effect of the barium. The œdematous swelling extended as far as the belly. Etiologically these two cases clearly support the assumption that inflammation and inflammatory œdema are the indirect result of the paralysing of sensory or motor nerves. This being so, the interference with the circulation, observed in both cases, must be regarded as a serious factor in bringing about the inflammatory processes. I should like, however, to point out that these subordinate effects are not to be regarded as in any way unfavourable, and that they in no way interfere with the value of chloride of barium in cases of colic. According to my experience this is a drug worthy of the highest consideration."

THE SPREAD OF TUBERCULOSIS THROUGH EXCRETA.

Professors Cadéac and Bournay administered to a young bull in the course of four days a tuberculous lung of a cow full of bacilli. During the five following days there was taken, morning and evening, a quantity of the bull's fæces (seven oz. av.) which was dissolved in water, filtered, and inoculated into rabbits. Of the sixteen rabbits used for the purpose two died of septicæmia and the remainder all died showing tuberculous lesions. Microscopic examination of the bull's fæces revealed the presence of the Koch bacillus.—*Journal de Lyon.*

THE TREATMENT OF RABIES.

The following letter, addressed to the editor of *La Presse Vétérinaire*, appears in the December number of that journal:—"In conformity with my promise, I send you an account of my mode of treating pronounced rabies. It consists, first, of the use of sulphate of soda, chloral hydrate, and a decoction of linseed, given as a drink, in the following dose to a dog of, say, 45lbs. (avoird.):—

Sulphate of Soda	.. ..	100 grammes (3½ ozs. av.)
Chloral Hydrate	.. ..	5 „
Decoction of Linseed	.. ..	500 „

"This is given for the purpose of calming the attacks and producing at the same time a purgative and refreshing action. The linseed decoction is not only refreshing but also diuretic. The diuresis which it produces allays the

inflammation of the urino-genital apparatus, so frequently observed in cases of this kind. To help on evacuation, I follow up the above treatment with two enemas, composed as follows:—

1st.—Decoction of Linseed	250	grammes.
Glycerine	5	„
2nd.—Linseed as before.		
Chloral Hydrate	2½	„

(1 gramme = 15½ grains.)

"This is given ten minutes after the former. In case the patient should vomit his first drench, I give him a second, exactly the same. Even when the weight of the dog is greater than 45 lbs., it is not necessary on that account to increase the dose. It is better to repeat it every two or three hours until purging begins, and to help this on by enemas of decotion of linseed and glycerine. This treatment must go on till the rectal tenesmus (straining) has ceased. With regard to feeding, as long as the patient does not seem emaciated, I forbid all solid food, but feed him on liquids, say, infusion of linseed and milk in equal quantities, to which may be added, thrice a day, chloral hydrate in the proportion of 2½ grammes each time. Afterwards, when the patient is convalescent, I allow him solid food, but I continue the purgatives, reduced to one half. I go on with draughts of linseed water, milk, and chloral hydrate until recovery. This generally occurs in eight days. Such is the treatment which I have finally adopted after all sorts of experiments. It has given me absolutely positive results, and I am persuaded that if it were tried on a human subject affected with rabies, it would bring about his recovery. It costs little to try it, and I most earnestly wish that it could be tried. I should be glad if your readers would draw the attention of their medical friends to this subject, and get them to adopt my treatment, giving the veterinary man the chance of observing its results.—Yours faithfully, POURTALE."

The editor of *La Presse Vétérinaire*, M. Rossignol, makes the following "reflections" on M. Pourtalé's letter:—"To treat a dog affected with rabies is a dangerous thing; experiments of this kind can be tried only in our veterinary schools or by specialists protected against the always possible bite. Yet such experiments ought to be made, for, if facts should confirm M. Pourtalé's statements, medical men would be in possession of a secret which would enable them to combat effectively a disease against which all remedies hitherto employed have proved ineffectual. The subject is worthy of being treated seriously, and, therefore, I should be glad to see our veterinary schools attempting a serious verification of the Pourtalé method. Of course, the most careful and most minute precautions must be taken to protect the experimenters from the bites of their patients, but that ought not to be difficult when once a proper apparatus has been provided, and, first of all, a means of securing the patient. I have had long talks with M. Pourtalé; he has abundant faith in his treatment, and he invites everybody to verify it. Why should we not do so? M. Pourtalé states also that it is possible to protect dogs against rabies by vaccinating them. Why not give him the chance of verifying his assertion?"

DISINFECTION OF THE SURGEON'S HANDS.

Dr. Poten writing to the *Monatsschrift für Gynäcologie* says that he has been experimenting on the best means of disinfecting hands that have become dirty in the course of the day with medical or other work. Mere washing for five minutes with soap and water and a nail-brush produced extremely bad results, and these were but little improved when Dr. Poten tried a second washing, likewise for five minutes, with sublimate solution. It was found

that the sublimate had no lasting effect on the micro-organisms that gather on the skin. Dr. Poten found that the best results were to be obtained by washing the hands in alcohol after they had been carefully cleaned in the ordinary way with soap and water.

FLIES IN STABLES.

It is well known that one means of diminishing this plague is to exclude bright sunshine, and also that the greatest enemy of the fly is the swallow, which ought, therefore, to be encouraged to build its nest in or near every stable. Another good plan is to hang up bunches of mug-wort or common ferns, on which flies gather eagerly. These should be suspended by strings from the roof of the stable and removed at night-fall; a sack should be held underneath, and the string suspending the bunch of ferns cut in such a way that the bunch falls into the sack before the flies have time to fly away. It has been also recommended to whitewash stables every year about the end of February, and to add to every bucket of lime-water about ¼ of litre of cresolin; this is a most effectual cure for flies.

VETERINARY STATISTICS OF THE PRUSSIAN ARMY FOR THE YEAR 1894.

From the report recently published, it appears that during the year 1894 there were 29,005 cases of sickness amongst the army horses, or 37·9 per cent. of the whole number. This is one of the higher percentages that have been observed within the last twelve years, during which period the percentage has varied from 30 to 47. The percentage in 1893 was 2·8 lower, and in 1892 it was 1·5 higher. Chest diseases were responsible for a large proportion of the cases of sickness. Of the 29,005 horses 26,457 (91·2 per cent.) were cured, 1,053 died, and 282 were killed (together 4·60 per cent.). In addition to these, 369 (1·27 per cent.) were dismissed from the army; the remainder were still in hospital. This total loss ot 5·87 per cent. was equal to 2·23 per cent. of the total army strength, being 68 more horses than in the preceding year. The diseases are divided into the following groups: acute infectious diseases, 1,728, of which 1,306 were diseases of the chest (died 58); diseases of the nervous system, 257 (died 99); diseases of the eye, 571; diseases of the respiratory organs, 1,065 (died 134); diseases of the vascular system, 104; (died 69), diseases of the urino-genital organs 43 (died 7). There are reported 4,870 cases of disease of the digestive apparatus, amongst which are 3,662 cases of colic; the losses under this heading, including horses "dismissed," is 495 or 10·16 per cent. External diseases are divided as follows:—Diseases of the outer integument 6,873, of which 3,147 were wounds; hoof-diseases 2,615 (loss, including dismissals, 18); sandcracks 135, founderings 182. Of other disorders of the locomotor apparatus 10,664 cases are reported, 311 of which ended in death and 177 in dismissal; total loss thereby 4·57 per cent.

Amongst the cases of diseases of the digestive organs there figure not fewer than 821 of pustular inflammation of the mouth, all of which were cured. The animals attacked by colic, 3,662 in number, as above stated, form 12·6 per cent. of all the cases of sickness, or 4·8 per cent. of the army strength; of these 3,168 (86·48 per cent.) were cured, 493 (13·46 per cent.) died or were killed, and 1 was dismissed. The number of cases under this heading is the highest since 1886, and fifty horses more were lost thereby than in the preceding year. A continuous increase of colic cases is to be observed since 1887, when there were 2,147 only. The losses also are heavier from 1889 onwards (some 12 to 13 per cent.) than they were in the years that preceded 1889 (10 to 11½ per cent.). This is with almost general consent attributed to the fact that from year to year new

substitutes in the way of fodder are given to the army horses, such as maize, rye, pease, beans, etc. If various tests with these substitutes have given no bad results, that proves nothing for general practice, for the simple reason that in these special cases particular care is taken with the materials. Eserin was administered with perfect success except in a few cases; arecolin was also administered in a few cases with success. Some of the principal causes of death in this category were as follows:—Primary rupture of the stomach, 36; secondary, in consequence of injury to the intestine, 56; rupture of the small intestine, 4; of the cæcum, 12; of the colon, 21; rupture of the diaphragm and consequent displacement of intestines, 17; involution of the small intestine, 56; intussusception of the rectum on itself, 4; lodgment of fæces in small intestine, 8, and in the cæcum and colon, 21. In the case of one horse, after an injection of eserinan intestinal stone, as big as a man's fist, was voided; in the dead body of another was found a similar stone, as large as a child's head, immovably fixed in the intestine just at the place where the colon joins the rectum.

DOUBLE OVARIECTOMY IN THE CASE OF A NYMPHOMANIAC MARE.

Dr. Langillotti-Buonsanti, Principal of the Royal Veterinary College in Milan, contributes the following interesting account of a case which came under his own observation, to *La Clinica Veterinaria*, from which we translate it direct:—"A bay mare, 15 hands high, about three years old, was brought to the College on 14th January last. Her owner informed me that he had run her in harness for more than three months. with perfect satisfaction and without accidents of any kind. One day in September, however, whilst she was trotting along a country road and drawing her accustomed load—a veterinary surgeon's trap—she was seized with a fit of madness, became ungovernable, and fell into a canal bordering the road, dragging along with her the carriage and its occupants. The canal was pretty deep, and a good deal of trouble was experienced in extricating the mare and the carriage therefrom. After this escapade the owner of the mare would trust her no more in his carriage, but hired her out to a farmer for working in the fields. She did no work, but she had become very irritable and very dangerous, kicking out viciously, and scarcely letting anyone approach her. In consequence she was sent to the veterinary college here for examination and treatment.

"On arrival I had her cast, with the usual precautions; then I proceeded to examine the vagina, with the help of the Polansky speculum, fitted with an electric reflector. The speculum penetrated with some difficulty on account of the hymen, which presented itself more distinctly than is usually the case, but after passing the entrance to the vagina the difficulty disappeared, because the hymen, in the form of a circular membrane, became completely dilated, forming simply one piece with the vaginal parts. The same fact was observed on introducing the hand. Then gradually, as the open speculum was withdrawn, it was observable how the hymen returned to its former position and presented itself again in the form of a circular membrane with an opening in the centre. The inspection brought out nothing of particular importance. The vagina was short and not very wide, the mare being a virgin. The cervical canal (cervix uteri), not protruding far into the vagina, was of regular formation; its perfect permeability was easily determined by manual examination, as the index finger could penetrate to the inside without difficulty. Digital exploration of the meatus urinarius was likewise performed, but with negative results, and a catheter was employed for exploration of the bladder, as the owner of the mare said he had from time to time observed calcareous deposits on the labia of the vulva. The decisive elements of the diagnosis, however, were furnished by the rectal

examination. The mare was laid on her left side with her hind-quarters raised; the right hand of the operator, when pressed against the left wall of the pelvis, found easily the ovary of that side in the form of a large oblong potato, easily grasped in the hollow of the hand through the wall of the rectum. When the operator squeezed it the mare neighed and struggled a good deal. The right ovary was smaller than the left, and rounder, but seemed larger than the normal, having regard to the size of the mare, her age, and the fact that she had never yet had a foal.

"The diagnosis thus left no room for doubt: the mare was subject to fits of nymphomania on account of the increased size of her ovaries, especially of the left; this was probably due to cysts, although the ovaries seemed hard to the touch. There was no course open but to perform ovariectomy. This was proposed to the owner, who seemed inclined to entertain it, but in order to overcome his objections and enable us to perform the operation, so interesting in the circumstances, a certain amount of compensation was guaranteed in case death should supervene. The operation was performed on 17th January, after the mare had been kept for two days on half rations and completely fasting for the twelve hours preceding the operation. As the weather was very severe at the time, it was determined not to proceed by our favourite method, namely, laparotomy, but to try the operation per vaginum. The mare's feet being conveniently fastened by the Raabe and Lunel hobbles, and the vagina as well as the external genital organs and the tail having been washed with sterilised water, it was an easy matter to make an incision in the upper wall of the vagina. The shortness of the vagina rendered easy the task of arriving at the ovaries without extending the arm very far, but of course it was impossible to bring them close to the incision. The difficulty of getting the left ovary, the larger one, into the chain of the *écraseur* was enormous and could not be overcome. The vagina was not only short but also narrow. The hymen was forcibly dilated by the introduction of the operator's fore-arm; the *écraseur* (extended along the fore-arm) entered, likewise forcibly, the pelvic cavity through the incision, but at the moment of applying the chain to the broad ligament of the ovary the operation proved to be quite impossible, because space was wanting to move the handle of the instrument, as the case demanded, and thus render possible the passing of the chain by the right hand on to the ligament of the ovary which the hand already held in its grasp. All this time the mare remained tolerably quiet and was quite docile but we had to abandon our efforts, as they proved quite fruitless.

"The only alternative was to cast the mare and complete the operation by laparotomy. We chloroformed her with our usual Dubois-Berr apparatus; of our usual pure distilled chloroforms we had to use 200 grammes (7 oz. av.). The ordinary operations connected with laparotomy were carried through without incident, scrupulous attention being paid to the prescribed rules regarding antiseptics, but the search for and grasp of the ovaries presented greater difficulty on account of the intestines, which burdened the operator's hand, and this occupied a little longer time than usual. The left ovary, through want of looseness in the broad ligament, could with difficulty be brought close to the abdominal incision and was removed by the *écraseur;* for the right ovary the *écraseur* had to be placed right inside the abdomen. The wound was sewed up, beginning with the peritoneum and going on to the muscular layers and so to the skin, a drainage tube being previously inserted.

"The mare was kept completely fasting for 48 hours. A clyster was administered daily of borate of sodium, 100 grammes, and salicylate of sodium, 40 grammes (1 gramme = 15·43 grains). The temperature varied from 101° to 103° Fahr. Slight œdema, which showed itself below the abdomen, disappeared when we used scarification. Once a day we made

along the drainage tube an irrigation with a tepid solution of 1 per cent. corrosive sublimate, which was followed by pulverised ethereal solution of iodoform. As early as the first eight or ten hours after the operation, a tracheal wheezing began to be audible; this has been observed in other horses that have undergone chloroform narcosis. In consequence we made the mare inhale creosote vapour. On the third day we offered the mare a little food, but she scarcely tasted it. The temperature had risen to 104° Fahr., respiration 44, pulse very weak; examination of the thorax showed dulness on both sides. On the fourth day (21st January) the mare's condition had grown much worse, weakness very noticeable, temperature 105°, thoracic dulness increased. Digitalis was prescribed, but the mare died two hours afterwards, just four days after the operation.

"At the *post-mortem* there was found extensive bilateral pneumonia, with incipient gangrene; in the abdominal cavity a small quantity of blood-stained liquid. The margins of the vaginal incision were held together by a thin layer of clotted blood. In the abdominal incision the stitches of the peritoneal suture were lacerated; those of the muscular wall and of the skin were intact. The mare had evidently died from the acute pneumonia (severe pulmonitis), produced, without doubt, by the chloroform. The left ovary was full of cysts, one of which was very big, and weighed, without the liquid, nearly 50 grammes; the right ovary, bigger than the normal, showed also a few cysts. The case of a mare, less than three years old, nymphomaniac through cysts in the ovaries, if not unexampled, is certainly very rare."

A GHASTLY STORY FROM THE FAR EAST.
THE BLACK DEATH AMONGST ANIMALS.

Professor Janson of Tokio (Japan) writes to the *Archiv für wissensch. und prakt. Thierheilkunde* as follows:—"In the absence of statistical information in China, one has to depend for details as to the number of victims carried off every year by the plague, on the statements of the coffin-makers. From these it appears that last year in Canton alone, over 80,000 human beings were carried off by this fearful scourge. It has been observed there that animals take a very important part in spreading the disease amongst the people, and, indeed, that the disease always breaks out *first* amongst the lower animals. Several species are susceptible to it, as, for instance, rats, mice and swine, which sickened in Canton in great numbers. Sometimes animals suffering from the disease, or which had actually died of it, were consumed as food by the Chinese, and these people, of course, took the plague. A decree has been published forbidding the slaughtering of swine for food purposes till further notice. From the province of Yunnan, it is reported that the plague first broke out amongst rats, was then transferred to fowls, and so spread to swine and goats, and lastly, attacked horses and cattle. Very scanty details are to hand regarding the symptoms of this disease amongst domestic animals, but it appears that it runs in them a very rapid course, just as in the human subject, and always ends in death. According to the report of a French missionary, plague-stricken rats leave their holes and hiding-places, show no fear of man, stagger about in a strange way on their hind-legs, then quickly collapse and fall dead on the floor. In one of the quarters of Canton, before the outbreak of the plague amongst the human population, as many as 35,250 dead rats were collected.

"Kitasato has ascertained by examination amongst plague-stricken houses in Hong Kong, that the rats and mice found there dead had the same bacilli in their blood as were found in the blood of the human victims. On the basis of these observations I formulate the following conclusions: *(a)* rats and mice

are attacked by the plague in the same waytas men, and are to be regarded as a prolific means of spreading the desease among men; (*b*) it is extremely probable that the plague is conveyed from them to swine, which either, as in the similar case of trichinosis, become infected by devouring the dead rats or take the disease through the medium of human excreta; this may very easily occur, as the Chinese so frequently herd together with their swine; from the use of swine's flesh in this infected condition, the plague is farther spread amongst the human population, as appears from official reports in Canton; (*c*) according to all reports, ancient and modern, and on the basis of the facts established by Kitasato's investigations, it is to be assumed that other domestic animals are susceptible to the contagion of the plague; (*d*) according to Kitasato's statements, based upon experiments with domestic fowls, pigeons are immune against the plague.

"The plague presents itself as a sort of septicæmia, with a predilection for the lymphatic apparatus and the spleen, and might, therefore, in the case of the domestic animals, be easily confused with splenic fever. The distinction could only be established by reference to the characteristic bacilli, which are to be found in the blood even whilst the patient is alive. The microparasite is, according to Kitasato, a bacillus with somewhat blunted ends, which can be coloured with the usual aniline dyes, and that more distinctly at the ends than in the middle; these bacilli grow best on blood-serum at blood-temperature.

"In Hong Kong, the following symptoms were noted amongst human patients affected with the plague; after three to five days of incubation, the patient shows high fever and painful swelling of the lymphatic glands; this swelling generally begins in the femoral glands, and extends gradually to those of the pubes, arm and neck; the tongue is furred, the patient suffers severe headache and delirium, sometimes vomiting and diarrhœa set in, and the patient generally dies on the second or third day. The mortality amounted to 75 or 80 per cent. The bacilli are to be found in greatest number in the lymphatic glands and spleen. At *post-mortem* examinations the lymphatic glands show the principal lesions, and are very much swollen, with jelly-like infiltration of the surrounding connective tissues. The spleen is enlarged.

"The principal cause of the spread of the plague is said to be the filthy mode of life of the Chinese. According to trustworthy official reports there are in Hong Kong in every house a great number of swine, which are kept under the beds and in the kitchen, not only of the ground floors, but of the basement, and of the first and second and upper floors. Under every bed were found from five to seven big swine, and their excreta and urine trickled through the holes in the wretched flooring to the houses below! This incredible filthiness in their habits is shown in other aspects of Chinese life. The lower classes seldom, or never, wash their clothes, although they wear them for six years on end and even longer!

"As China has, now that the war between it and Japan is at an end, been rendered a little more accessible, I hope, by means of these communications, to draw attention to the intimate connection between human and animal plagues, and to provoke further investigations. I wish, likewise, to emphasize the fact that the bubo-plague on the island of Hainan and in the north of Tonquin, which borders on the notorious Chinese province of Yunnan, has been raging since the end of 1894. Simultaneously with this, a destructive plague has been raging amongst the cattle and buffaloes of a district in Tonquin; this plague amongst the cattle has been considered by Dr. Vergin, who was sent out there by the French Government, to be identical with the bubo-plague amongst the human inhabitants of the district."

PURPURA.

[THE following was found in the rooms of a student after a recent examination. We trust that he is now qualified and that he has gone to a place where such muses cease from troubling.]

The swellings and petechiæ are not only on the skin,
But the organs, mucous membranes, and subderma have them in,
The disease is not contagious and you can't inoculate,
You can say he took the poison with the aliment he ate.
The hæmorrhage is likely due to altered vessel wall,
The largest in the lungs are found, while in the nose they're small,
The skin beside the bleeding may ulcerate and crack,
And the nasal mucous membrane show a bloody-ulcered track.
Hæmorrhage is common in the substance of the bowel,
And petechiæ in the muscles, myocardium as well,
In the lungs, the spleen, and kidney you may have extravasation,
And yet the vital fluid shows but little alteration.
Remember that the swellings at first are often small,
That confluence enlarges them, that they're painful not at all,
If by chance the tumefaction should quickly disappear,
You can lay your bottom dollar that the patient's end is near.
About the pulse and temperature your answer may be formal,
While doubtless later much increased at first they're often normal,
Watch no less when he's doing well and don't be too elate,
Lest œdema of the nose and throat, the "case" asphyxiate.
Another case of sudden death is some internal bleeding,
Although he may be doing well, his breathing calm, and feeding,
Other ailments that have swellings and the petechial spot—
They are strangles, glanders, anthrax, and the whole blood-poisoning lot.
By ergot, iron, turpentine, with this disease we grapple,
Or Lugol's iodine 1 per cent. injected down his thrapple,
Quinine, carbolic, potas. chlor.; tracheotomy if you must,
But don't foment the swellings for you'll only make them bust.

Notes and News.

AN interesting gathering of veterinary students took place in the University Hotel recently, when Principal Williams and Professor W. O. Williams entertained the students and teachers of the New Veterinary College, together with a few friends, to supper. Upwards of 120 gentlemen were present. Principal Williams presided, being supported by, among others, Mr. Skirving, Niddrie Mains; Professor Ivison Macadam, Professor Bradley, and Professor Davies. The toast of "The Profession" was proposed by Mr. Phelan and acknowledged by Professor Bradley; Professor Macadam gave "The Students," for whom Mr. R. Williams replied; and the chairman responded for the toast of "Our Hosts," proposed by Mr. A. Connell. A very pleasant social evening was spent, an excellent programme of music being rendered.

TUBERCULIN.—At the Académie de Médecine M. Grasset read a paper on the early diagnosis of phthisis in man by means of injections of tuberculin. Everyone understood the utility of detecting the nature of this malady in its incipient stage, but all practitioners are well aware that the diagnosis is far from being easy and conclusive, for the bacilli do not appear in the expectoration until a

relatively late period. The difficulties are still further increased where the tuberculosis is seated in the bones, the brain coverings, etc. Consequently, a new sign, if it be sure and without danger, is not to be despised. Tuberculin seems to furnish these two conditions, as testified by that great authority, M. Straus, who declared that "this substance constitutes an excellent diagnostic means in incipient phthisis." The tuberculin was furnished M. Grasset for his experiments by the Pasteur Institute, and the dose employed was infinitesimal but sufficient, 150th of a grain. The mode of using is simple. The patient is kept in bed two or three days, and his temperature taken morning and evening, and marked. The hypodermic injection is then made once a day for two or three days more in the thigh, and the temperature carefully registered three times a day. No abscess follows or any local irritation. M. Grasset cited a series of cases in which he was able to arrive at an exact opinion on the nature of the affection. A man, aged 43, entered the hospital presenting symptoms of rachidian meningitis, without any external sign of lesion of the vertebræ. For four months he had been suffering from inter-costal pains, coming on in paroxysms, the spine was painful to pressure, especially over the dorsal vertebræ. The left eye showed symptoms of exophthalmia, while the upper lid dropped. The body had evidently been wasting for some time. The temperature was normal, but after the injection of the tuberculin, it rose to 100°. M. Grasset pronounced the case to be one of tuberculous meningitis. A patient, aged 23, presented the symptoms of Addison's disease. He had had a costo-vertebral cold abscess, which got well after operation. The bronzed colouring had commenced five months before he entered the hospital, and for the previous month he had a slight cough. At the apex of the lung in front, expiration was found to be slightly prolonged, and behind, vesicular expansion was diminished; there were no bacilli in the sputa. The temperature, which had been oscillating between 97° and 98°. rose to 100° six hours after the injection of the tuberculin, justifying the tuberculous nature of the disease of the renal capsules. After giving the details of several other cases (14 in all), the report concluded by stating that the results obtained warranted the prosecution of further clinical experiments which would permit the Academy one day to draw up instructions for diagnosis of tuberculosis in man by tuberculin as it has been called upon to do in the case of the bovine species. M. Weber read, in answer to a letter from the Minister of Agriculture, consulting the Academy on the value of tuberculin as a means of diagnosing tuberculous disease in the bovine species, a report, of which the following is an abstract:—Tuberculin at the dose of from six to ten grains provokes in tuberculous animals a rise of temperature attaining from two to five degrees, a reaction sufficient to affirm the existence of tuberculous lesions, in no matter how slight a degree, whereas the same dose has no appreciable effect on non-tuberculous animals, although they may be attacked by grave lesions of the lungs or of the other viscera. The febrile reaction appears between the twelfth and fifteenth hour after the injection, and lasts several hours. It was said that tuberculin produced no reaction in certain animals recognised tuberculous at the autopsy. The fact is true, but these animals are always in such an advanced stage of the malady that the diagnosis is easily made by the ordinary methods of examination without having recourse to tuberculin. The reproach was also made that tuberculin hastened the evolution of the disease. This objection has no foundation, for tuberculin presents no danger to the animal. Nothing is so easy to-day as the removal of tuberculous disease from a stable; it is sufficient to submit all the animals to the tuberculin test, separate the healthy animals from all those which show a reaction after the injection, disinfect the stable, and allow no animal to enter it without careful examina-

tion. In concluding, the speaker proposed the following resolution :—Tuberculin is an excellent means of establishing the diagnostic of bovine tuberculosis, and its employment should be recommended." (Adopted).—*Medical Press.*

THE ARTIFICIAL PREPARATION OF CAFFEINE.—The January number of the journal of the Berlin Chemical Society contains a short paper by Professor Emil Fischer of Berlin (the successor in Berlin University of that world-famous chemist the late A. W. von Hofmann) and Herr Lorenz Ach, of which the outcome may be very far-reaching. These gentlemen have just succeeded in synthetising caffeïne (also called theïne), the constituent of tea and coffee, which imparts to these their invigorating and refreshing properties. In other words, they have carried out the last stages in the building up of this extremely complex chemical compound from other simpler (if still complex) ones, which in their turn are capable of being prepared from the four elements, carbon, hydrogen, oxygen, and nitrogen. Caffeïne, or theïne, belongs to the class of chemical substances known as the vegetable alkaloids, a class which embraces quinine, strychnine, morphine, nicotine, and many other compounds of the highest importance in medicine. But although it may be safely predicted that, with the rapid growth of organic chemistry, the artificial production of the many and various alkaloids will be merely a question of time, there have been up to the present only a few of them synthetised, the difficulties to be overcome being very great. It would, of course, be quite out of place to enter here into the complicated series of chemical reactions by which Messrs. Fischer and Ach have built up caffeïne in the laboratory; let the statement suffice for the present :—The amount of caffeïne in different teas varies considerably, but we shall not be far wrong in putting it at 2½ per cent. on the average, while coffee contains about 1 per cent. In every 100 lbs. of tea, therefore, we use 2½ lbs. of caffeïne. The imports of tea to the United Kingdom in 1889 amounted to 221,602,660 lbs. the actual consumption being 185,621,800 lbs. (or 4·9 lbs. per head of population), equivalent to 4,640,545 lbs. of caffeïne. These figures show what an immense consumption there is of caffeïne in the form of an infusion of tea. The pure substance (prepared from tea) is likewise now used to some extent for medicinal purposes. The new process is merely a laboratory one, and its cost would be entirely prohibitive of its being applied in its present form on a commercial scale. But the discoverers are careful to point out that this will no longer be the case if one particular stage of the method should eventually prove capable of accomplishment in a more direct way. Whether the artificial preparation of caffeïne and its consequent cheapening would be an actual blessing to the world in this age of "nerves" remains to be proved. This discovery—a brilliant one from a scientific point of view—has at all events brought us within measurable distance of it.

HOW CAMPHOR IS MADE.—Many of the seeds of the camphor tree have been sent to the Department of State from Japan, in the hope of affording to the United States a chance to add this valuable substance to its vegetable product. The tree is a species of laurel, and it grows in extensive forests in the mountainous regions of the south of Japan, far from the sea. Large groves are owned by the Japanese Government, the wood being very desirable for shipbuilding. Many of the trees attain an enormous size, often measuring twelve feet in diameter and sometimes attaining twenty feet. The seeds or berries grow in clusters, resembling black currants in size and appearance. The fine grain of the wood renders it particularly valuable for cabinet work. The camphor is a resinous gum. To get it the tree is necessarily destroyed, but, by a stringent law of the land, another is planted in its stead. The simple method of manufacture employed by the natives is

as follows:—The tree is felled to the earth and cut into chips. A big metal pot is partly filled with water and placed over a slow fire. Then a wooden tub is fitted to the top of the pot, and the chips of camphor wood are placed in this. The bottom of the tub is perforated, so as to permit the steam to pass up among the chips. A steam-tight cover is fitted on the tub; from this tub a bamboo pipe leads to another tub, through which the enclosed steam, the generated camphor, and oil flow. This second tub is connected in like manner with the third. The third tub is divided into two compartments, one above the other, the dividing floor being perforated with small holes to allow the water and oil to pass to the lower compartment. The upper compartment is supplied with a layer of straw, which catches and holds the camphor in crystals. The camphor is then separated from the straw, packed in wooden tubs of 133 pounds each, and is ready for market. After each boiling the water runs off through a faucet, leaving the oil, which is utilised by the natives for illuminating and other purposes. Adulteration of camphor gum is practised mostly by adding water just as far as the buyer will tolerate it. Sometimes the purchaser will find that twenty pounds of water have run out of a tub in twelve hours. The unadulterated article, known as "old dry," can sometimes be bought, but not often. In a letter on the subject newly received by the Department of State, Consul Smithers writes from Osaka, Japan, that it would be very desirable to send a competent agent from this country to Japan, who should visit the camphor-producing districts and study the processes of manufacture, packing, &c.

Mr. William Hunting, F.R.C.V.S., the veterinary expert employed by the Canadian Government, has reported in very favourable terms upon the merits of the Canadian horses which are being imported in such large numbers to Glasgow and to various English ports. He states that they are now very well known in London, and expresses the opinion, from the experience he has had of hundreds of them, that they have worked in London streets for years, that there are no better horses. Their manners, constitution, feet and legs, are all that can be desired, and he thinks they are destined to become even more popular than they are at the present time. He strongly urges that no animals under five years of age should be sent over. Occasionally younger animals are imported, but, like immature home-bred horses, they are not able to stand hard work. Mr. Hunting's report has been made in consequence of some criticism of Canadian horses that has appeared, the burden of which is that they are not suited for city work, and that although their first cost is cheaper than home-bred animals, they are yet dearer in the long run. Another complaint was that as the cattle market has been closed to our Canadian cousins, they are seeking to demoralise the horse market, and that the lower prices at which the animals were offered was proving prejudicial to the home horse-breeding industry. Mr. Hunting concludes his report by stating that, in his opinion, there are no better "vanners" than Canadian horses when five years old and in proper condition, and that he knows of no large firm having once used them that have discontinued buying them.

Sir Thomas Gibson-Carmichael, M.P., and Tuberculosis.—The interest which has been excited in Scotland by the plucky resolve of Sir T. D. Gibson-Carmichael, M.P., to retain no animal in his grand herd of Aberdeen-Angus cattle at Castlecraig which cannot successfully undergo the tuberculin test, is bound to extend south of the Tweed. He has practically pledged himself that no animal shall be sold from the herd for breeding purposes unless it has been tested for tuberculosis, and has failed to give the temperature reaction associated with the presence of the disease. Next year

Sir T. Carmichael will take another step, for of the polled bulls he will then offer at the Perth spring sale every one, despite high breeding, will be warranted free from tuberculosis; in other words, no bull will be put forward which has not successfully undergone the tuberculin test.

ELECTRICAL PHOTOGRAPHY IN EDINBURGH, REMARKABLE RESULTS.—Dr. Dawson Turner has been applying the Röntgen photography to practical purposes of surgery. One of the latest uses to which he has been successful in putting it has been the discovery by its aid, in the lower thumb joint of a lady's hand, of a needle, which had been there for years, and which, by ordinary surgical processes, the surgeons had failed hitherto to discover. The hand of the lady was photographed 18th February at the Surgeons' Hall, Edinburgh, and the needle came out quite distinctly on the plate as a black line in the thumb joint. It will now, of course, be possible to operate upon it with some chance of success, seeing that the location of this foreign substance has been accurately determined. An interesting photograph has also been taken in Chalmers' Hospital of the hand of a patient who has been suffering from bone disease in the third and fourth fingers. It had been intended to amputate the fingers at the junction with the hand, but the photograph, it appears, made it plain that the disease had not only laid hold of the fingers, but had penetrated to the bones of the hand as well. The surgeons who have the case in hand will therefore have a consultation as to whether the hand must not now be amputated at the wrist. What the new photography, it is pointed out, has done in this case is to save the patient from two amputations. Had the fingers only been taken off now it would have been necessary to have another operation by and by at the wrist, in order to endeavour to stop the progress of the disease. The demand which has sprung up for Crooke's tubes, by means of which the new electrical photography is conducted, has been so great that they have become exceedingly scarce and difficult to get, and an effort is now being made to produce them in Edinburgh.

BRUMBIE HORSES OF AUSTRALIA. A STRANGE EQUINE VARIETY.—The Brumbie horse of Australia, though not a distinct equine variety, possesses attributes and qualities peculiar to itself, and, like the wild cattle and wild buffaloes of Australia, is the descendant of runaways of imported stock. At no distant period of Australian pastoral history the Brumbie was as great a scourge to the western pastoralist as the rabbit has since become; but a scourge, fortunately, that could be dealt with more easily, and by perseverance abolished. In Brumbie country, the passing traveller must tend his horses closely; for the young Brumbie stallions, constantly driven from their haunts by the older sires, wander in search of companions, and show marvellous intelligence in taking these, when found, into seclusion. It is at all times a difficult matter to recover stray stock from the Brumbie mobs. The term "with the Brumbies" is a common one throughout the bush of Australia to signify hopelessly lost. Portions of New South Wales and southern Queensland were some years ago almost devastated by Brumbies; and all sorts of devices were resorted to by squatters to rid themselves of the pests. Many sheep-owners fenced in their water-holes with barbed wire in such a way that nothing larger than a sheep could enter to drink. In this manner tens of thousands of horses perished. A crush—that is, long lines of parallel fences just wide enough for one horse to pass at a time—was erected; they were driven into this long lane, at the end of which stood an expert, armed with a keen knife. As each animal passed, its jugular vein was severed, and the bleeding creature tore madly away to its native scrub, only to stagger and die from loss of blood within half a mile of the trap. This device, though barbarous, did away with the difficulty of removing carcasses, and became the

universal method of destruction. In this work of destruction animals showing extra quality were occasionally reserved for use; but in order to enable the horsemen to drive them away, it was necessary to stop their galloping, and this was done very simply. A packing needle and strong twine were run through the point of each ear, the twines being left in; these were then tied under the horse's chin, bending the ears down on the cheeks. Tied in this way a horse will not gallop, but may be turned and driven quietly.

Correspondence.

To the Editor of THE VETERINARY JOURNAL.

DEAR SIR,—I think it is quite time that the "surgical operations" we, as veterinary practitioners, *may* perform in the eyes of the R.S.P.C.A. should be specified, with the conditions which warrant us in performing them. The actions of this Society are really becoming too serious, and soon we shall not be able to operate at all, without a threat, if not an action at law, from the R.S.P.C.A.

If we may not apply surgical interference to deformities, &c., of the tail, limb, or any other part of the body, without this wealthy Society coming down upon us, I think the sooner we *try* to make ourselves safe the better.

Whether "nicking" is justifiable in ALL cases I am not going to give any opinion upon; but I may say, without contradiction, I believe that it is frequently performed by educated veterinary practitioners with beneficial results to the animals and their owners. What looks worse than an otherwise good-looking animal carrying his tail on one side or close to his rump? and I have seen the latter position so excessive that the crupper could not be worn without chafing. If it is unlawful for us to relieve this state of things then it ought to be unlawful to do any other painful operation. There is far more cruelty perpetrated in "spaying" pigs than by any operation that I am acquainted with, and if any operation ought to be stopped on a plea of cruelty, this ought.

I remember being called cruel, brutal, and I don't know what, by a gentleman who happened to come into my yard whilst I was operating on a horse for the reduction of a very bad "Thoroughpin," and his first remark was, "Why don't you chloroform the poor beast?" which, I need hardly say, had already been done, the animal at the time lying perfectly still—for he was well under its influence—and to which I drew my friend's attention; but he was so horrified at the sight (probably of the blood) that he mentions it to me to-day whenever he meets me.

Perhaps you would like me to give you a short sketch of what I did, as I do not know whether anybody has ever succeeded with such a formidable operation on the horse. The bursa of the flexor pedis perforans, as it passes over the hock (that marked *b* in Fig. 136 of Dollar's translation Möller's Surgery) was distended nearly the whole of its extent, at one part to the size of a half-quartern loaf, and just below the "chestnut" it appeared to be all but through the skin. The animal had been "fired" some six months previously, without any beneficial result, and he was now very lame and useless.

The owner, however, prized the animal very much, as it had been such an excellent performer over a country, and was anxious something should be tried. I, therefore, decided to open the bursa, which I did by slitting it from top to bottom, exposing the tendon, taking out an eliptical piece of the sac, and then bringing the edges together again by sutures. To my surprise, it went on splendidly for three weeks, the animal putting his weight on the limb, frequently resting the sound one, and walked over from side to side in the stall, apparently without inconvenience; but, of course, it was in slings. Although the secretion of synovia was profuse, still it was getting less and less every day, and

the wound healing; but, unfortunately, the animal became "griped," and died in twelve hours of "enteritis." On the whole, however, the result of the operation itself was encouraging, and worth repeating when an opportunity offers itself, providing the R.S.P.C.A. does not summon me, and even if they did not get a conviction (they certainly would if my friend were on the bench), make it very unpleasant and expensive. Moreover, I am rather afraid I should stand precious little chance of a good word from some of our members, for I think I saw it said, not long ago, at one of the Society's meetings, "that it would be a bold man who dared open this bursa"; but an eminent surgeon tells me it is a comparatively common operation in the H.S., and, therefore, we ought not to despair of success in our patients, if our clients will only go to the expense and the R.S.P.C.A. will permit us to operate without molestation.

Trusting this will offend no one, as it is certainly not so intended by—
Yours, &c., GEO. A. BANHAM, F.R.C.V.S.

"A FEEBLE DEFENCE."

To the Editor of THE VETERINARY JOURNAL.

SIR,—It has not usually been my custom to force myself on the hospitality of an opponent, and personally I am unable to appreciate the want of "truly courteous not to say manly feeling" in availing myself of the pages of a neutral journal for the purpose of answering an unprovoked attack, but as you have with such magnanimity pressed upon me the desirability, nay the paramount duty, of replying to your remarks in your own pages, I am by no means averse to that course.

But firstly permit me to return thanks for the quite unmerited honour implied by my being made the subject of editorial remark for two months in succession—a distinction which my youth and inexperience and general insignificance scarcely deserved—and to further say that even my limited journalistic experience enables me to recognise in "errors and sophistries—poisoned arrows and poisonous doctrine" merely a delicate method of complimenting an adversary on what we regard in a friend as "closely-reasoned and altogether admirable" argument.

I am not concerned to defend my good manners nor even my controversial methods; but before proceeding to the main issue I should like to express my acknowledgments for being included amongst all the "other authorities," and also briefly to point out that as I had made no reference to any person whatever at the meeting of Committee, the suggestion that anyone "was quite justified in using it—[*i.e.*, a report of the proceedings of the Examination Committee]—nay, bound to use it in self-defence," savours somewhat of the mental attitude of the wolf towards the lamb, while the principle that a person into whose keeping confidential information comes is not bound to respect it because it is not first hand, if recognised by certain peculiar codes of honour, does certainly not obtain in ordinary circles, where the receiver is usually thought worse than the original delinquent.*

Coming now to questions of fact, I think I may conclude that as in Mr. Barrett's letter the position which you, Sir, "took up has been completely vindicated," in proof of which you appended it "as the antidote to Mr. Dollar's poisonous doctrine," and as it "sweeps away all Mr. Dollar's sophistries and dispels them for ever," it is to that, as expressing your views, that I may chiefly direct my attention.

* Mr. Dollar is again reminded that the information referred to was not confidential. Even if it had been, and even if I had been a member of the Educational Committee, and present when Mr. Dollar seconded the resolution, I think that I should have neglected my duty by allowing Mr. Dollar's vagaries to be hidden under a bushel.

I believe that Mr. Barrett is my senior by at least half a decade, and I therefore accept his introductory paternal maxims with all the submission they deserve. With the rest I may deal very briefly. Mr. Barrett thus summarises his points:—

"Students who possess any certificates in Divisions I., II., and III. (excepting University of Wales) are entitled to Registration without enquiry; those possessing any Certificate in Division IV. must show that they passed all the subjects at the same time; and lastly, a student who possesses none of these certificates must pass the preliminary examination at one and the same time."

In another place Mr. Barrett shows that by the words "preliminary examination" he means "the special examination of the [General Medical] Council."

Firstly, then, I would point out that the General Medical Council holds no examination of any such kind, either "special" or general. That is Mr. Barrett's first error. And as his whole fabric is reared on that error, it collapses along with it.

Secondly, "Students who possess any Certificates in Divisions I., II., and III. are "*not*" entitled to registration without enquiry." That is Mr. Barrett's second error.

Thirdly, as the General Medical Council holds no preliminary examination of its own, "a student who possesses none of the certificates" *cannot* pass the preliminary examination either "at one and the same time" or any other time. That is the third and last of Mr. Barrett's errors, and completes the triumphant refutation of my "poisonous doctrines" in, I hope, a sufficiently satisfactory manner. Mr. Barrett has, unfortunately, allowed his imagination to dictate his facts and his wishes to dominate his logic. If he, or any other person, questions the statements here set forth, I may say they are given on the authority of the Medical Registrar, of 299, Oxford Street, London, W., to whom I beg to refer all enquirers.—Believe me, Sir, your obedient humble servant, JNO. A. W. DOLLAR.

SOUTH AFRICAN HORSE SICKNESS.

To the Editor of THE VETERINARY JOURNAL.

SIR,—Having seen several cases of this disease, and having had the privilege of discussing the subject personally with Dr. Edington when I was staying for a few days at Grahamstown, South Africa, no one can be more alive than I am to the fact that we are indebted to him for all the exact knowledge we possess about horse sickness. I am much obliged to him for pointing out the error I fell into inadvertently when seeking a handy name for "*paard ziekte*."

The brilliant results achieved by Dr. Edington in the investigation of this disease "shows up" all the more conspicuously Dr. Sander's futile researches. This German doctor (see *Journal of Comparative Pathology*, December, 1895), evidently unaware of the work done by his predecessors in the same field, merely repeated the exploded theory that horse sickness is anthrax.

I would be deeply grateful to Dr. Edington if he would throw some light on the mysterious subject of "salted" horses.—Yours faithfully,

14th March, 1896. M. H. HAYES.

Communications, Books, Journals, etc., Received.

Recueil de Médecine Vétérinaire (Alfort); La Presse Vétérinaire (Paris); Bulletin de la Societe Centrale de Medicine Veterinaire (4me trimestre 1895: Paris); Le Bulletin Veterinaire (Orleans); L'Echo Vétérinaire (Liége); Annales de Médecine Vétérinaire (Brussels); Berliner Thierärztliche Wochenschrift (Berlin: Richard Schoetz); Oesterreichische Monatsschrift für Thierheilkunde (Vienna: M. Perles); La Revista Veterinaria (Buenos Aires); La Revista Agronomica (La Plata); La Clinica Veterinaria (Milan); Il Nuovo Ercolani (Pisa).